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Regulations and Non-Regulatory Revisions to State Implementation Plan: Delaware

Atlantic Environmental Associates, Inc.
Waltham, MA

Prepared for

Environmental Protection Agency
Research Triangle Park, NC

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Regulations and Non-Regulatory Revisions to State Implementation Plan: Delaware

By

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Contract No. 68-02-3565

EPA Project Officer: Willis P. Beal

Prepared for

U.S ENVIRONMENTAL PROTECTION AGENCY
Control Programs Development Division
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16. ABSTRACT

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA-approved State and/or local air pollution control regulations cited by reference in the Federal Register; regulations promulgated as of August 1, 1981 have been included in this document.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979. State and/or local air quality regulations which have not been Federally approved as of August 1, 1981, are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations. A summary sheet of the regulatory revisions is provided to give a quick historical assessment of the changes.

The second part of the document contains the text of non-regulatory SIP revisions approved by EPA up to August 1, 1981, excluding notices or certifications of public hearings and technical support data. A complete tabulation of these revisions is also provided.

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PREFACE

This document has been produced in compliance with Section 110(h) of the Clean Air Act, as amended in 1977, which mandates periodic publication of State Implementation Plan (SIP) requirements. The first section of the document comprises the Federally approved SIP regulations. It consists of the EPA approved State and/or local air pollution control regulations cited by reference in the Federal Register; all regulations Federally promulgated as of August 1, 1981 have been included.

The present compilation constitutes an update of a previous documentation of regulations as of July 1, 1979.* State and/or local air quality regulations which have not been Federally approved as of August 1, 1981 are not included. However, any omissions of regulations from this document in no way affects the ability of the respective Federal, State or local agencies to enforce such regulations.

This document is not intended to provide a tool for determining the enforceability of any given regulation. Rather, it is intended to provide a comprehensive compilation of those regulations which are incorporated by reference into Title 40, Part 52, of the Code of Federal Regulations (CFR). The exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation in this document does not, in itself, render the regulation enforceable by either the State or EPA.

The regulations have been organized in this document according to the official State/local agency format. However, since State air quality regulations vary widely in their organization, content, and language, a standardized subject index has been added. The index listings consist of both pollutant and activity oriented categories to facilitate usage. For example, regulations which apply to copper smelters may be found under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State are not included herein but can be found under Title 40 Code of Federal Regulations, Part 52.

Additionally, a summary sheet of the regulatory revisions is included to provide a quick historical assessment of the changes. These summary sheets contain the date of submittal to EPA of each revision and the Federal Register publication date on which the revision was approved by EPA. A brief description of the regulation which was submitted is also included.

In accordance with the Act, the second part of the document contains non-regulatory SIP revisions approved by EPA up to August 1, 1981. All approved non-regulatory revisions listed under Identification of Plan in the CFR are included except notices or certifications of public hearings, and technical support data. Non-regulatory submittals which have only received EPA approval on selected elements are included in their entirety with an accompanying indication of the status of Federal actions on the non-approved elements. The non-regulatory revisions have been organized in this document

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* Regulations and Non-Regulatory Revisions to State Implementation Plan: Delaware, EPA-450/2-80-014, prepared under Contract 68-02-3388, July 31, 1980.

according to the date of publication of EPA approval in the Federal Register. For historical completeness, a complete tabulation of these revisions is provided at the beginning of this second section.

SUMMARY OF
EPA-APPROVED REGULATORY REVISIONS TO STATE OF DELAWARE SIP
BETWEEN JULY 1, 1971 AND JULY 31, 1981

Publication of Approval	Submittal Date	Page	Document Description
07/30/79	12/02/77	44FR44497	Revisions to Regulations V, XIV, XVII, XXIII.
03/06/80	05/03/79	45FR14558	Revisions to ozone related regulations including Regulations I, XXIV and XXV.
08/01/80	10/05/78	45FR51199	Revision to eliminate certain outdated requirements relating to Regulations V and XVIII and correction of typographical errors relating to Regulations III, VIII and XV.

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REGULATION NO. I

DEFINITIONS AND ADMINISTRATIVE PRINCIPLES

Section 1 - General Provisions

1.1 The words and phrases defined and the administrative principles presented in this regulation shall apply to all regulations, unless the context clearly indicates otherwise.

Section 2 - Definitions

ACCUMULATOR: The reservoir of a condensing unit receiving the condensate from the condenser.

ACT: Title 7, Delaware Code, Chapter 60, entitled Division of Environmental Control.

ACTIVITY: Construction, or operation, or use of any facility, property, or device.

ACTUAL OPERATING CONDITIONS: Any conditions or operating parameters, or the quantities representing these conditions or parameters, which exist during any operation.

AIR CONTAMINANT: Particulate matter, dust, fumes, gas, mist, smoke, or vapor or any combination thereof, exclusive of uncombined water.

AIR CONTAMINANT CONTROL DEVICE OR SYSTEM: Any method, process, equipment, or stack which removes, reduces, or renders less noxious air contaminants discharged into the atmosphere.

AIR CONTAMINANT SOURCE: Any source from which there is emitted into the atmosphere any air contaminant regardless of who owns the property or facility from which the emission comes. Without limiting the generality of the foregoing, this term includes all types of commercial and industrial plants and works, heating and power plants and stations, shops and stores; buildings and other structures of all types, including single and multiple family residences, apartment houses, office buildings, public buildings, hotels, restaurants, schools, hospitals, churches, and other institutional buildings, automobiles, trucks, tractors, buses and and other motor vehicles (hereinafter called "motor vehicles"); garages, vending and service locations and stations; railroad locomotives; ships, boats and other waterborne craft; airborne craft; portable fuel-burning equipment; incinerators of all types; indoor and outdoor; and refuse dumps and piles.

AIR POLLUTION: The presence in the outdoor atmosphere of one or

more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life or to property or which unreasonably interferes with the enjoyment of life and property within the jurisdiction of this State, excluding all aspects of employer-employee relationships as to health and safety hazards.

AIR QUALITY CRITERIA: A series of observed relationships between air pollutants and their effects of health, welfare, vegetation, or property. Criteria for any given effect are expressed in terms of pollutant concentrations, duration of exposure and method of measurement.

AIR QUALITY STANDARD: An air quality level as established by Regulations in terms of a limit on contaminant levels in the atmosphere. Such standards shall be consistent with the air quality criteria.

AIR STAGNATION: A weather situation characterized by limited horizontal and vertical mixing.

AIR STAGNATION ADVISORY: The National Weather Service method of advising of the existence of air stagnation over a discrete area.

ALLOWABLE EMISSIONS: The level of emission of an air contaminant which is authorized by a rule, a permit condition, or a Department order. Annual allowable emissions shall be based on the maximum annual rated capacity of the source, unless the source is subject to enforceable permit conditions or orders which limit the operating rate and/or hours of operation.

ALTERATION: Any physical change in, or change in the method of operation of, any air contaminant source which results in the addition of a new air contaminant or an increase in the quantity of one or more existing air contaminants, except for routine maintenance, repair and replacement.

AMBIENT AIR: Atmosphere.

ASPHALT: A dark-brown to black cementitious material (solid, semisolid, or liquid in consistency) in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.

ATMOSPHERE: The air that envelops or surrounds the earth and includes all spaces outside of buildings, stack or exterior ducts.

AUTOMOBILE: All passenger cars or passenger car derivatives capable of seating 12 or fewer passengers.

AUXILIARY BURNER: Equipment to supply additional heat, by the combustion of an auxiliary fuel, for the purpose of attaining temperatures sufficiently high (a) to dry and ignite waste material, (b) to maintain ignition thereof, and (c) to promote complete

combustion of combustible solids, liquids, and gases.

AUXILIARY HEAT INPUT: The heat value of an auxiliary fuel provided to promote complete combustion.

BACKGROUND CONCENTRATION: The concentration of an air contaminant which is due to natural sources.

BEST AVAILABLE CONTROL TECHNOLOGY: An emission limitation, including a visible emission standard, or equipment standard based on maximum degree of emission reduction which the Department, on a case-by-case basis, taking into account energy, environmental and economic impacts and other cost, determine is achievable through application of production process and available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustions techniques. In no event shall application of "Best Available Control Technology" result in emissions of any pollutants which will exceed the emission allowed by any applicable standard established pursuant to Section 111 or 112 of the Clean Air Act, 42 U.S.C. 1857 ET SEQ.

BOILER LANCING: The operation of removing soot, slag, and/or fly ash from the walls of the firebox, generating tubes, and other parts of fuel burning equipment.

BOTTOM FILLING: The filling of a tank truck or stationary storage tank through an opening that is flush with the tank bottom.

BRITISH THERMAL UNIT: The quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at or near its point of maximum density (39.1 degrees F), usually abbreviated BTU.

BULK GASOLINE PLANT: A gasoline storage and distribution facility with an average daily throughput equal to or less than 76,000 liters (20,000 gallons) which receives gasoline from bulk terminals by trailer transport, stores it in tanks, and subsequently dispenses it via account trucks to local farms, businesses, and service stations.

BULK GASOLINE TERMINAL: A gasoline storage facility which receives gasoline from its supply source primarily by pipeline, ship, or barge, and delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by tank truck; and has an average daily throughput of more than 76,000 liters (20,000 gallons) of gasoline.

COATING LINE: One or more apparatus or operations which include a coating applicator, flash-off area, and oven wherein a surface coating is applied, dried, and/or cured.

COIL COATING: The coating of any flat metal sheet or strips that comes in rolls or coils.

COLD CLEANING: The batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

COMBUSTION CONTAMINANT: Any air contaminant discharged into the atmosphere by reason of a combustion operation.

COMBUSTION OPERATION: Any operation which causes or results in the burning of any type of material.

COMFORT HEATING EQUIPMENT: Fuel burning equipment designed to heat the interior of a building or dwelling for the sole purpose of providing comfort for the inhabitants of the structure.

COMFORT VENTILATING EQUIPMENT: Equipment producing an emission into the open air resulting from the cooling of the interior of a building or dwelling for the sole purpose of providing comfort for the inhabitants of the structure.

CONDENSATE: Hydrocarbon liquid separated from the natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

CONDENSER: Any heat transfer device used to liquefy vapors by removing their latent heats of vaporization. Such devices include, but are not limited to, shell and tube, coil, surface, or contact condensers.

CONSTRUCTION, INSTALLATION OR ALTERATION PERMIT: Written notice that the construction, installation or alteration of an air contaminant source or control device has been approved by the Department.

CONTAMINATED WASTE: Waste having been exposed to, or potentially capable of spreading, a communicable disease.

CONVEYORIZED DEGREASER: Any continuous system which transports metallic objects through a bath containing organic solvent for the purpose of cleaning or degreasing.

CRUDE OIL: A naturally occurring mixture which consists of hydrocarbons and/or sulfur, nitrogen and/or oxygen derivatives of hydrocarbons and which is a liquid at standard conditions.

CUTBACK ASPHALT: Asphalt cement which has been liquefied by blending with petroleum solvents (diluents). Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

DELIVERY VESSEL: Tank trucks or trailers equipped with a storage tank and used for the transport of gasoline from sources of supply to stationary storage tanks.

DEPARTMENT: The Department of Natural Resources and Environmental

Control as defined in Title 29, Delaware Code, Chapter 80 as amended.

DESULFURIZED FUEL GAS: A fuel gas with the sulfur content reduced to less than ten (10) grains of H2S per one hundred (100) standard cubic feet of fuel gas.

DISTILLATE FUEL OIL: Any liquid fuel derived directly or indirectly as the distilled product of crude petroleum, and having a maximum Saybold Universal viscosity of forty (40) seconds at one hundred (100) degrees Fahrenheit.

DIVISION: The Division of Environmental Control

DOMESTIC BURNING: The open burning of leaves, tree branches, or yard trimmings, other than tree trunks and tree roots, originating on the premises and conducted by individuals domiciled on the premises; but excluding commercial operations.

EFFECTIVE STACK HEIGHT: The sum of the stack height and the rise of the stack gases above the stack due to the exit velocity and the temperature of the gases.

EMISSION: The release or discharge, whether directly or indirectly, of any air pollutant in to the ambient air from any source.

ENGINEERING GUIDE: A statement of guidelines, engineering factors to be considered, standards established, or general procedures to be followed in meeting the requirements of various regulations adopted by the Department.

EQUIPMENT START-UP: The process of bringing a unit of equipment on-line from an inoperative condition such that normal production rates are being achieved.

EXISTING INSTALLATION, EQUIPMENT, SOURCE, OR OPERATION: Any air contaminant source or control device under construction or in existence at the time of adoption of an applicable Regulation.

FABRIC COATING: The coating of a textile substrate with a knife, roll or rotogravure coater to impart properties that are not initially present, such as strength, stability, water or acid repellancy, or appearance.

FINAL REPAIR COATING: The final surface coatings applied to correct topcoat imperfections.

FIREBOX: The chamber or compartment of a boiler or furnace in which materials are burned but does not mean the combustion of an incinerator.

FLARE: An engineered device designed to burn waste gases from process operations or relief valves.

FLUE: See "STACK".

FLUE GAS: Products of combustion which are transported through a flue.

FLY ASH: Any particles of gas-borne solid matter resulting from the combustion of solid fuel but excluding process emissions.

FOREBAYS: The primary sections of a wastewater separator.

FREEBOARD HEIGHT: For a vapor degreaser, the distance from the solvent vapor level in the tank to the lip of the degreaser tank. For a cold cleaner, the distance from the liquid solvent level in the degreaser tank to the lip of the tank.

FREEBOARD RATIO: The freeboard height divided by the width of the degreaser.

FUEL: Any combustible matter including, but not limited to coal, gas, oil, and refuse.

FUEL BURNING EQUIPMENT: Any equipment used for the burning of fuel or other combustible material for the primary purpose of utilizing the thermal energy released.

GARBAGE: Animal or vegetable waste matter originating in houses, kitchens, restaurants, hotels, produce markets or similar installations.

GASOLINE: Any petroluem distillate having a Reid vapor pressure of 27.6 kPa (4 pounds per square inch) or greater and used as automotive fuel.

GASOLINE DISPENSING FACILITY: Any site where gasoline is dispensed to motor vehicle gasoline tanks from stationary storage vessels.

GOOD ENGINEERING PRACTICE DESIGN: With respect to stack heights, the height necessary to insure that emissions from the stack do not result in excessive concentrations of any air pollutant in the immediate vicinity of the source as a result of atmospheric downwash, eddies and wakes which may be created by the source itself, nearby structures or nearby terrain obstacles.

HAZARDOUS PARTICULATE MATTER: Particulate matter which poses special health hazards due to chemical or biological reactivity or particle size.

HEAT INPUT: The potential thermal energy resulting from the complete combustion of any fuel.

HOT WELL: The reservoir of a condensing unit receiving the warm condensate from the condenser.

INCINERATION: The process of igniting and burning solid, semi-solid, liquid, or gaseous combustible waste to their products of

combustion.

INCINERATOR: An engineered apparatus, and all appurtenances thereto, designed to reduce combustible solid, semi-solid, liquid, or gaseous waste by high temperature burning. Incinerators shall be classified in accordance with engineering guides and acceptable practices.

INDIRECT HEAT EXCHANGE: Transfer of thermal energy in such a manner that the material being heated is not contacted by and adds no substance to the products of combustion.

INDUSTRIAL WASTE: Any waste produced by a manufacturing process.

LARGE APPLIANCES: Doors, cases, lids, panels and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water heaters, dishwashers, trash compactors, air conditioners, and other similar products.

LIGHT DUTY TRUCK: Any motor vehicles rated at 3864 kilograms (8500 pounds) gross weight or less which are designed primarily for purpose of transportation or are derivatives of such vehicles.

LINEAR EXTRAPOLATION: A technique for determining an unknown value lying numerically outside the range of a series of values which is in direct linear proportion to another series of known values by comparing the two series, utilizing the following equation:

$$\frac{x - a3}{a2 - a3} = \frac{b1 - b3}{b2 - b3}$$

where: x = The unknown value;
a2 = Any known value in the series containing the unknown value;
a3 = Any known value, other than a2, in the series containing the unknown value;
b1 = The value in the series of known values corresponding to x;
b2 = the value in the series of known values corresponding to a2;
b3 = The value in the series of known values corresponding to a3.

LINEAR INTERPOLATION: A technique for determining an unknown value lying numerically inside the range of a series of values which is in direct linear proportion to another series of known values by comparing the two series, utilizing the equation set forth under Section 2.48 of this Regulation.

LOWEST ACHIEVABLE EMISSION RATE: For any source, that rate of emissions which reflects:

(a) The most stringent emission limitation which is contained in the

implementation plan of any state for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or

(b) The most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent. In no event shall the application of this term permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source standards of performance.

MANUFACTURING PROCESS: Any process principally operated for the purpose of producing any durable or consumable good or goods.

MASS EMISSION RATE: The weight of any air contaminant discharged per unit of time.

MATERIAL: Any gas, liquid, or solid or any combination thereof.

METAL FURNITURE COATING: The surface coating of any furniture made of metal or any metal part which will be assembled with other metal, wood, fabric, plastic or glass parts to form a furniture piece.

METROPOLITAN PHILADELPHIA INTERSTATE AIR QUALITY CONTROL REGION: A geographical region compsed of Burlington, Camden, Gloucester, Mercer, and Salem Counties in the State of New Jersey; Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in the State of Pennsylvania; and New Castle County in the State of Delaware.

MODIFICATION: Any physical change in, or change in the method of operation of, any air contaminant source which results in an emission to the atmosphere of a new air contaminant or an increase in the emission rate to the atmosphere of one or more existing air contaminants. Upon modification, an existing source shall become subject to Regulation XX only with respect to those pollutants which, after modification, are either newly emitted, or emitted at an increased rate. Routine maintenance, repair and replacement shall not be considered a modification. Conversion to coal required for energy considerations, as specified in Section 119(d)(5) of the Clean Air Act, shall not be considered a modification whenever the Department determines it necessary to maintain ambient air quality standards. Change in ownership of an existing facility shall not be considered a modification. This definition shall not apply to Regulation No. XXV.

NATIONAL AMBIENT AIR QUALITY STANDARDS: Those primary and secondary ambient air quality standards which are promulgated by the Administrator of the Federal Environmental Protection Agency.

NATIONAL WEATHER SERVICE: An agency of the United States Commerce Department charged with the responsibility of providing weather information and service to the public and to commercial aviation.

NATURAL SOURCE: Any air contaminant source with is not man-made.

NEW INSTALLATION, EQUIPMENT, SOURCE, OR OPERATION: Any air contaminant source the construction or modification of which is commenced after the date of adoption of any applicable regulation or standard. As this definition applies to Regulation No. XX, New Source Performance Standards, it means any air contaminant source the construction or modification of which was commenced after August 17, 1971. As this definition applies to Regulation No. XXI, Emission Standards for Hazardous Air Pollutants, it means any air contaminant source the construction or modification of which was commenced after March 31, 1971. This definition shall not apply to Regulation No. XXV.

NITROGEN OXIDES: Nitric oxide (NO) or nitrogen dioxide (NO2) or any combination thereof.

ODOR: That property of an air contaminant that affects the sense of smell.

OPACITY: That condition which renders material partially or wholly impervious to rays of light and causes a degree of obstruction to an observer's view.

OPEN AIR: See "ATMOSPHERE".

OPEN BURNING: Any fire which is not conducted in fuel burning or process equipment or an incinerator.

OPEN TOP VAPOR DEGREASER: The batch process of cleaning and removing soils from metal surfaces by condensing hot solvent vapor on the colder metal parts.

OPERATING PERMIT: Written notice that the operation of an air contaminant source or control device has been approved by the Department.

PAINT APPLICATION TRANSFER EFFICIENCY: The percentage of coating solids which leave the coating applicator and remain on the surface of the product.

PAPER COATING: Coatings applied to paper and pressure-sensitive tapes regardless of substrata. Related web-coating processes on plastic films and decorative coatings on metal foil are included in this definition.

PATHOLOGICAL WASTE: Human and animal remains and wastes, consisting of carcasses, organs, and organic wastes from hospitals, laboratories, sewage treatment facilities and similar sources, consisting of up to 85% moisture and 5% incombustible solids.

PARTICULATE MATTER: Material, other than uncombined water, which is suspended in or discharged into the atmosphere as a liquid or

solid.

PENETRATING PRIME COAT: An application of low viscosity liquid asphalt to an absorbent surface. It is used to prepare an untreated base for an asphalt surface. The prime penetrates the base and plugs the voids, hardens the top, and helps bind it to the overlying asphalt course. It also reduces the necessity of maintaining an untreated base course prior to placing the asphalt pavement.

PERSON: Any individual, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, developer, user or owner, or any Federal, State or Local governmental agency or public district or any officer or employee thereof.

POTENTIAL TO EMIT: The capability at maximum capacity to emit a pollutant in the absence of air pollution control equipment. "Air pollution control equipment" includes control equipment which is not, aside from air pollution control laws and regulations, vital to production of the normal product of the source or to its normal operation. Annual potential shall be based on the maximum annual rated capacity of the source, unless the source is subject to enforceable permit conditions which limit the annual hours of operation. Enforceable permit conditions on the type or amount of materials combusted or processed may be used in determining the potential emission rate of a source.

POTHOLE: A hole or pit in a road surface generally caused by successive freezing and thawing temperature of the road surface aggreviated by vehicular traffic.

PRILLING OPERATION: Any solidification process which employs the mechanism of molten droplets in free fall through a heat exchange medium.

PRIMARY AMBIENT AIR QUALITY STANDARDS: Those ambient air quality standards which, in the judgement of the Department, are requisite to protect the public health and allow an adequate margin of safety.

PRIME COAT: The first film of coating applied in a surface-coating operation.

PRIVATE DWELLING: A domestic residence housing no more than three (3) families and where no commercial or industrial activity is carried on.

PROCESS EMISSION: Discharge into the atmosphere of air contaminants resulting from a specific process or combination of processes.

PROCESS OPERATION: Any chemical, industrial, or manufacturing operation including, but not limited to, heat transfer, fluid flow, evaporation, humidification, absorption, extraction, distillation,

drying, mixing, classification, sedimentation, decantation, filtration, crystallization, centrifugation, disintegration and material handling.

PROCESS WEIGHT RATE: A rate established as follows:

(a) For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

(b) For cyclical or batch unit operations or unit processes, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

PROFESSIONAL ENGINEER: A person licensed to practice professional engineering in the State of Delaware or otherwise eligible to practice engineering within the State as determined by the Delaware Association of Professional engineers.

RECREATIONAL PURPOSES: Any purpose which, in the judgement of the Department, fulfills a physical or social need, including, but not limited to, camping, ceremonies, and religious rites.

REFUSE: Garbage, rubbish, or trade waste.

RINGLEMANN SMOKE CHART: The chart published and described in the U.S. Bureau of Mines Information Circular 8333, or any chart, recorder, indicator, or device for the measurement of smoke density which is approved by the Department as the equivalent of said Ringelmann Scale.

REFINERY FUEL GAS: Any gas which is generated by a petroleum refinery process unit and which is combusted, including any gaseous mixture of natural gas and fuel gas.

REID VAPOR PRESSURE: The absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases as determined by American Society for Testing and and Materials, Part 17, 1973, D-323-72 (Reapproved 1977).

ROLL COATING: The application of a coating material to a substrate by means of hard rubber or steel rolls.

RUBBISH: Waste solids not considered to be highly flammable or explosive, including but not necessarily limited to rags, clothes, leather, rubber, carpets, excelsior, paper, ashes, furniture, tin cans, glass, crockery or masonry.

SALVAGE OPERATION: Any business, trade or industry engaged entirely or partially in salvaging or reclaiming any product or material, including, but not necessarily limited to, metals, chemicals, motor vehicles, shipping containers or drums.

SANITARY LANDFILL: A method of disposing of refuse on land without creating nuisances or hazards to public health or safety by utilizing engineering principles to confine the refuse to the smallest practical area, to reduce it to the smallest volume, and to cover it with a layer of earth as frequently as may be required by the permit.

SCRUBBER: A gas washer or auxiliary equipment designed to remove contaminants in wet form from products of combustion or from process emissions.

SECONDARY AMBIENT AIR QUALITY STANDARDS: Those ambient air quality standards which, in the judgement of the Department, are requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of air contaminants in the ambient air.

SECONDARY METAL OPERATION: Operations involving or related to the refining of metal when such operations use a raw material other than the metal ore.

SETTLEABLE PARTICULATES: Particulate matter present in air or other gases which tend to settle out rather than remaining suspended.

SMOKE: Small gas-borne particles resulting from incomplete combustion, consisting predominantly of carbon and other combustible material.

SMOKE DETECTOR: A device using a light source and a light detector whch can automatically measure and record the light obscuring power of smoke at a specific location in the flue or stack.

SOLID FUEL: A fuel which is fired as a solid, such as anthracite or semi-anthracite, bituminous or sub-bituminous coal, lignite, coke, wood, or any solid by-product of a manufacturing process that may be substituted for any of the above specifically mentioned fuels.

SOLVENT: Organic materials which are liquid at standard conditions and which are used as dissolvers, viscosity reducers, or cleaning agents.

SOLVENT METAL CLEANING: The process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyorized degreasing.

SOOT BLOWING: The operation of removing soot, slag and/or fly ash from the firebox walls or the tubes of fuel burning equipment by

the use of compressed air, steam or water.

SPLASH FILLING: The filling of a tank truck or stationary storage tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

STACK: A flue, chimney, conduit or other device constructed for the purpose of discharging air contaminants into the atmosphere.

STACK HEIGHT: The vertical distance measured in feet between the point of discharge from a stack into the atmosphere and the land thereunder.

STANDARD CONDITIONS: A gas temperature of 21 degrees C (70 degrees F) and a gas pressure of one atmosphere (14.7 pounds per square inch absolute).

STATIONARY SOURCE: Any fixed building, structure, facility, installation, or equipment which emits or may emit any air contaminant.

SUBMERGED FILLING: Filling of a tank truck or stationary tank through a pipe or hose whose discharge opening is entirely submerged when the liquid level is six inches above the bottom of the tank.

SULFUR RECOVERY OPERATION: Any operation designed for the recovery of elemental sulfur.

SURFACER COATING: The surfacer coatings applied over the primer and beneath the topcoat.

SUSPENDED PARTICULATES: Particulate matter which remains suspended in ambient air.

TAIL GASES: Gases and vapors released into the atmosphere from an industrial process after all reaction and treatment has taken place.

TOPCOAT: The surface coatings applied for the purpose of establishing the color and/or protective surface, including groundcoat and paint sealer materials.

TRADE WASTE: Any solid, liquid, or gaseous waste material or rubbish resulting from construction, building operations, or the prosecution of any business, trade or industry including, but not necessarily limited to, plastic products, cartons, paint, grease, oil and other petroleum products, chemicals or cinders.

TURNAROUND: The procedure of shutting a refinery unit down after a run to do necessary maintenance and repair work and putting the unit back on stream.

VACUUM PRODUCING SYSTEM: Any reciprocating, rotary, or centrifugal blower or compressor, or any jet ejector or device that takes

suction from a pressure below atmospheric and discharges against atmospheric pressure.

VAPOR BALANCE SYSTEM: A combination of pipes or hoses which create a closed system between the vapor spaces of an unloading tank and a receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded.

VAPOR-LADEN DELIVERY VESSEL: Any delivery vessel containing any organic vapors displaced from a stationary vessel during loading of such vessel.

VAPOR-LADEN STATIONARY VESSEL: Any stationary vessel containing any organic vapors displaced from delivery vessel during loading of such vessel.

VAPOR RECOVERY SYSTEM: A system that prevents release to the atmosphere of no less than 90 percent by weight of organic compounds emitted during the operation of any transfer, storage, or process equipment.

VAPOR-TIGHT: Capable of holding an initial vacuum for five (5) minutes without sustaining a pressure change of more than three (3.0) inches of water.

VENT: See "STACK".

VINYL COATING: Applying a decorative or protective topcoat, or printing on vinyl coated fabric or vinyl sheets.

VISIBILITY METER: Any device used for the purpose of measuring, recording, or indicating the reflectance of or opacity to light of an air contaminant stream.

VOLATILE ORGANIC COMPOUND: (Also denoted as VOC) Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate, that has a true vapor pressure greater than 0.1 millimeter of mercury at standard conditions.

WASTEWATER SEPARATOR: Any device or piece of equipment which utilizes the difference in density between oil and water to recover oil. It does not include any secondary separator located downstream from a primary separator, nor any wastewater treatment units such as a flocculator, clarifier or aerator.

Section 3 - Administrative Principles

3.1 In certain Regulations, air quality standards will be established. These standards shall not be interpreted to allow significant deterioration of existing air quality in any portion of the State; otherwise; they shall be paramount in matters pertaining to the control of air pollution throughout the State.

3.2 In addition to or supplemental to these air quality standards, certain emission requirements will be specified. Such emission requirements are selected as minimum controls necessary to ensure a reasonable quality of air throughout the State. Where it is established that these emission requirements are inadequate to attain or maintain the applicable air quality standard, the Department shall exercise its authority to require additional control measures.

3.3 The Department intends to have Regulations adopted governing the control of air pollution as rapidly as practicable. The lack of a Regulation governing an air contaminant or combination of air contaminants will not prevent the Department from taking any and all actions necessary to maintain a reasonable quality of air throughout the State.

3.4 If any part of these Regulations, or the application of any part thereof, is held invalid or unconstitutional, the application of such part to other persons or circumstances, and the remainder of these Regulations shall not be affected thereby and shall be deemed valid and effective.

3.5 The Department may enter into agreement(s) on a regional basis for the purpose of attaining air quality goals. Such interstate agreements shall facilitate the attainment and maintenance of air quality standards.

REGULATION NO. II
REGISTRATION AND PERMITS

Section 1 - General Provisions

1.1 The purpose of this Regulation is to describe the requirements to report and obtain approval of equipment which has the potential to discharge air contaminants into the atmosphere.

Section 2 - Registration of Air Contaminant Sources

2.1 The Department may require the written registration of air contaminant sources when, in its opinion, such information is necessary for the conduct of work of the Department.

2.2 Registrations shall be made on forms furnished by the Department. The forms may require information concerning the unit of equipment covered by the registration, the kind or amount of contaminant emitted by the equipment or any additional information required by the Department for the purpose of enforcing the rules and regulations of the Department of any change in any item of information furnished in compliance with this subsection, other than change of ownership, within a reasonable time not exceeding 30 days after the change is made.

2.3 Registration shall be made by the owner or lessee of the equipment, or his agent. If the registrant is a corporation, the registration shall be made by one individual who is a member of the group. If the registrant is a corporation, the registration shall be made by an appropriate representative of the corporation.

2.4 Information obtained through the provisions of this Regulation shall be made available for public inspection at any Department office except where such information is of a confidential nature as defined in Title 7, Delaware Code, Section 6014.

Section 3 - Construction, Installation, Alteration and Operation Permits

3.1 No person shall initiate construction, install, alter, or initiate operation of any equipment or facility or air contaminant control device which will emit an air contaminant prior to receiving approval of his application from the Department. In situations in which construction, installation, or alteration is proposed and operation of the equipment, facility, or air contaminant control device is to follow, only one application need be submitted. The application shall consist of a description of at least the following:

a. The equipment or apparatus covered by the application; and

b. Any equipment connected or attached to, or servicing or served by the unit of equipment or apparatus covered by the application; and

c. The plot plan, including the distance and height of building within a reasonable distance from the place where the equipment is or will be installed, if necessarily required by the Department; and

d. The proposed means for the prevention or control of the emissions or contaminant;

e. The chemical composition and amount of any trade waste to be produced as a result of the construction, installation, or alteration of any equipment or apparatus covered by this application;

f. Any additional information, evidence or documentation required by the Department to show what the proposed equipment or apparatus will do.

g. Methods and expected frequency of occurrence of the start-up and shut-down of the equipment, including projected effects of emissions to the atmosphere and on ambient air quality.

No approval to construct, install, alter, or initiate operation will be granted unless the applicant shows to the satisfaction of the Department that the source will not prevent or interfere with attainment or maintenance of any State or National Air Quality Standard. Any approval granted by the Department shall not relieve an owner or operator of the responsibility of complying with applicable local, State, and Federal laws and regulations.

3.2 In situations in which construction, installation, or alteration is proposed, and operation of the equipment, facility, or air contaminant control device is to follow, such operation shall not commence until written approval is obtained by the applicant from the Department. The Department may condition approval to operate on a demonstration by the applicant of satisfactory performance, the Department may require the applicant to cease emissions from the source. Upon granting written approval for operation, the Department shall give notice of such approval within five days of the date of approval.

3.3 Within 60 days of receipt of a written request by the Department, an owner or operator of an existing facility, equipment, or device which emits or causes to be emitted an air contaminant, and which is not exempted under Section 4.1, shall submit an application to the Department for a permit.

3.4 No permit or renewal thereof shall be issued by the Department unless the applicant shows to the satisfaction of the Department that the equipment, facility, or air contaminant control device is designed to operate or is operating without causing a violation of any rule or regulation of the Department and without interfering with the attainment or maintenance of National and State ambient air quality standards. The Department may, from time to time, issue or accept criteria for the guidance of applicants indicating the technical specifications which it deems will comply with the performance standards referenced herein.

3.5 Before a permit or any renewal thereof is issued, the Department may require the applicant to conduct such tests as are necessary in the opinion of the Department to determine the kind and/or amount of the contaminants emitted from the equipment or whether the equipment or fuel or the operation of the equipment will be in violation of any of the provisions of any rule or regulation fo the Department. Such tests shall be made at the expense of the applicant and shall be conducted in a manner approved by the Department.

3.6 A permit or any renewal thereof shall be valid for a period not to exceed three years from the date of issuance, unless sooner revoked by order of the Department, and may be renewed upon application to the Department.

3.7 In the event the Department denies a request for approval of a permit to operate any equipment, facility, or device for which an application was made, the applicant shall not commence operation until such time that approval has been obtained from the Department or a permit to operate has been issued by the Department.

3.8 Upon receipt of an application for the issuance of an operating permit or any renewal thereof, the Department, in its discretion, may issue a temporary operating permit valid for a period not to exceed ninety (90) days.

Section 4 - Exemptions

4.1 Any existing source which emits 25 tons per year or less of any air contaminant is exempt from the requirements of Section 3.3, except as provided for in Subsection 4.3 and 4.4.

4.2 A permit for installation, alteration, or operation shall not be required for the following new equipment or apparatus:

a. Air contaminant detector, air contaminant recorder, combustion controller or combustion shut-off.

b. Fuel burning equipment, other than smokehouse generators, which:

1. Uses only natural gas, LP gas, or other desulfurized fuel gas and has a rated heat input of less than 250 million BTU per hour; or

2. Is used in a private dwelling as defined in Regulation I; or

3. Has a BTU input of less than 1,000,000 BTU per hour.

c. Air conditioning or comfort ventilating systems.

d. Vacuum cleaning systems used exclusively for industrial, commercial, or residential housekeeping.

e. Ventilating or exhaust systems for print storage room cabinets.

f. Exhaust systems for controlling steam and heat.

g. Laboratory equipment used exclusively for chemical or physical analyses.

h. Internal combustion engines and vehicles used for transport of passengers or freight, except as may be provided in subsequent Regulations.

i. Equipment or apparatus emitting less than ten pounds per day of any air contaminant which, in the written opinion of the Department has little or no potential of causing air pollution.

j. Maintenance, repair, or replacement in kind of equipment for which a permit to operate has been issued.

k. Equipment which emits only nitrogen, oxygen, carbon dioxide, and/or water vapor.

l. Ventilating or exhaust systems used in eating establishments where food is prepared for the purpose of human consumption.

m. Equipment used to liquefy or separate oxygen, nitrogen or the rate gases from the air.

n. Fireworks.

o. Smudge pots for orchards or small outdoor heating devices to prevent freezing of plants.

p. Outdoor painting and sand blasting equipment.

q. Lawnmowers, tractors, farm equipment and construction equipment.

r. Gasoline station storage tanks and motor vehicle fuel servicing equipment.

s. Fireplaces for burning of wood and paper.

4.3 Provisions of Subsection 4.1 shall not apply to equipment directly involved in the following industries:

CHEMICAL PROCESS INDUSTRIES:

Chlorine
Explosives
Hydrofluoric acid
Nitric acid
Paint and varnish manufacturing

Cont'd.

CHEMICAL PROCESS INDUSTRIES

Plastics manufacturing
Printing ink manufacturing
Sulfuric acid
Synthetic fibers
Synthetic rubber

FOOD AND AGRICULTURAL INDUSTRIES:

Alfalfa dehydrating
Feed and grain
Fertilizers
Fish meal processing
Meat smokehouses

METALLURGICAL INDUSTRIES:

Aluminum operations
Brass and bronze smelting
Ferroalloys
Gray iron foundries
Lead smelting
Steel foundries
Zinc processes

MINERAL PRODUCTS INDUSTRIES:

Asphalt roofing
Asphaltic concrete batching
Bricks and related clay refractories
Castible refractories
Cement
Concrete batching
Rock, gravel, and sand quarrying and processing

PETROLEUM REFINING:

PETROCHEMICAL OPERATIONS:

PIGMENT OPERATIONS:

ORGANIC CHEMICAL INDUSTRIES:

INORGANIC CHEMICAL INDUSTRIES:

WOOD PROCESSING:

PETROLEUM STORAGE:

MISCELLANEOUS:

Fossil fuel burning equipment
Incinerators

4.4 Provisions of Subsections 4.1 and 4.2 shall not apply to any source which emits an air contaminant designated as a hazardous pollutant by the Environmental Protection Agency.

Section 5 - Applications Prepared by Interested Party

5.1 Application for an installation or alteration permit or for the renewal of such permit shall be made by the owner or lessee of the equipment, or apparatus or his agent, on forms furnished by the Department. Applications for an operating permit or its renewal may be made by letter. If the applicant is a partnership or group other than a corporation, the application shall be made by one individual who is a member of the group. If the applicant is a corporation, the application shall be made by an appropriate representative of the corporation. The application shall be filed at the Division of Environmental Control.

5.2 Each application shall be signed by the applicant, and certified by a professional engineer as to the accuracy of the technical information concerning the equipment, apparatus, or design features contained in the application, plus plans and other papers submitted. For the renewal of a permit, the applicant's professional engineer shall certify that the equipment satisfies the provisions of rules and regulations of the Department. The signature of the applicant shall constitute an agreement that the applicant will assume responsibility for the installation, alteration or use of the equipment or apparatus concerned in accordance with the requirements of this Regulation.

5.3 Application for the renewal of an operating permit shall be postmarked or date stamped by the Department upon personal delivery no later than ninety (90) days prior to the expiration of the permit.

Section 6 - Cancellation of Permits

6.1 The Department may cancel a permit if the installation or alteration is not begun or if the work involved in the installation or alteration is not completed, within the time limits specified in the permit.

6.2 With the consent of the Department and at its discretion an applicant may secure an extension of the expiration date after written request to the Department stating the reasons therefore. An extension may be granted for a period not to exceed six months. The Department shall not grant any further extensions without first holding a public hearing. The expense of such hearing shall be borne by the applicant.

Section 7 - Action on Applications

7.1 The Department shall act within sixty (60) days on an application for a permit or for a renewal of an operating permit and shall notify the applicant in writing of the status of the application.

7.2 If an application is disapproved, the Department shall set forth its objections in the notice of disapproval.

Section 8 - Suspension or Revocation of Operating Permits

8.1 The Department may suspend or revoke an operating permit for violation of this or any rule or regulation of the Department or any law administered by the Department and may take such other actions as it deems necessary.

8.2 Suspension or revocation of an operating permit shall become final immediately upon service of notice on the holder of the permit, unless otherwise stated in the notice os suspension or revocation.

Section 9 - Transfer of Permit Prohibited

9.1 No person shall transfer a permit from one location to another, or from one piece of equipment to another. No person shall transfer a permit from one person to another person unless thirty (30) days notice is given to the Department, and approval of such transfer is obtained in writing from the Department.

Section 10 - Availability of Permits

10.1 Any permit shall be available on the premises designated on the permit.

REGULATION NO. III
AMBIENT AIR QUALITY STANDARDS

Section 1 - General Provisions

1.1 Air Quality Standards are required to assure that ambient air quality shall be consistent with established criteria and shall serve to effectively and reasonably manage the air resources of the State of Delaware.

1.2 At such time as additional pertinent information becomes available with respect to applicable air quality criteria, recommendations shall be incorporated and the air quality standards shall be subject to revisions.

1.3 The absence of a specific ambient air quality standard shall not preclude actions by the Department to control contaminants to assure protection, safety, welfare, and comfort of the people of the State of Delaware.

1.4 Air Quality Standards are defined by frequency distribution presentations and arithmetic averages. The characteristic parameters describing the frequency distribution are the geometric mean and 99th percentile.

a. The geometric mean is defined as the Nth root of the product of N numbers. Assuming a log-normal cumulative frequency distribution, the 50th percentile value will be equal to the geometric mean.

b. The arithmetic average (mean) is defined as the sum of a set of values divided by the number of values.

c. The 99th percentile for a group of numbers is defined as that value which is exceeded by one percent of the numbers.

1.5 The ambient air quality values stated herein shall apply to all areas outside a source property line.

1.6 The sampling and analytical procedures and techniques employed to determine ambient air concentrations of contaminants shall be consistent with methods which result in a representative evaluation of the prevailing conditions. The following methods shall be used directly or employed as reference standards against which other methods may be calibrated;

a. Total suspended particulates shall be determined gravimetrically from samples obtained by the filtration techniques of the high-volume sampler, and shall be in accordance with procedures described in "Air Pollution Measurements of the National Air Sampling Network: Analyses of Suspended Particulates 1957-1961, "Public Health Service Publication No. 978, Washington, D.C., 1962.

b. Sulfur dioxide shall be determined colorimetrically by the reference Pararosaniline method or by the Equivalent methods: (1) Gas Chromatographic Separation - Flame Photometric Detection, (2) Flame Photometric Detection, and (3) Coulometric Detection provided certain precautions are taken as indicated in the Federal Register of August 14, 1971, Volume 36, Number 158.

c. Carbon monoxide shall be determined by the Non-dispersive Infrared (NDIR) method or by the equivalent method of Gas Chromatographic Separation - Catalytic Conversion - Flame Ionization Detection as indicated in the Federal Register of August 14, 1971, Volume 36, Number 158.

d. Photochemical oxidants shall be determined by the Gas Phase Chemiluminescence method or by the equivalent methods: (1) Iodide Colorimetric Detection, and (2) UV Photometric Detection of ozone provided certain precautions are taken as indicated in the Federal Register of August 14, 1971, Volume 36, Number 158.

e. Total hydrocarbons shall be determined by the flame ionization technique as described by Andreatch and Feinland, "Continuous Trace Hydrocarbons Analysis by Flame Ionization." Anal. Chem. 32:1021-1024, July, 1960. Methane shall be determined by gas chromatography. Non-methane hydrocarbons shall be determined by the difference of these two measurements.

f. Nitrogen dioxide shall be determined by the U.S. Environmental Protection Agency reference method or methods or such other method as the State approves.

g. Hydrogen sulfide shall be determined by the Methylene Blue Colorimetric Detection method or by the equivalent method of Gas Chromatographic Separation - Flame Photometric Detection.

Section 2 - General Restrictions

2.1 No person shall cause the Air Quality Standards specified in this Regulation to be exceeded.

Section 3 - Suspended Particulates

3.1 The Primary Ambient Air Quality Standards for Particulate Matter are:

a. An annual geometric mean of 70 micrograms per cubic meter not to be exceeded, based upon twenty-four hour average concentrations.

b. A value of 200 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.

c. A value of 500 micrograms per cubic meter not to be exceeded, based upon one hour average concentrations.

3.2 The Secondary Ambient Air Quality Standards for Particulate Matter are:

a. An annual geometric mean of 60 micrograms per cubic meter not to be exceeded, based upon twenty-four hour average concentrations.

b. A value of 150 micrograms per cubic meter not to be exceeded more than once per year, based upon twenty-four hour average concentrations.

Section 4 - Sulfur Dioxide

4.1 The Primary Ambient Air Quality Standards for Sulfur Oxides measured as Sulfur Dioxide are as follows:

a. An annual geometric mean value of 0.025 parts per million (ppm) by volume, seventy (70) micrograms per cubic meter (ug/m^3), not to be exceeded, based upon twenty-four average concentrations.

b. An annual arithmetic average value of 0.030 ppm, 80 ug/m^3, not to be exceeded, based upon twenty-four hour average concentrations.

c. A 99th percentile value of 0.10 ppm, 260 ug/m^3, not to be exceeded, based upon twenty-four hour average concentrations.

d. A value of 0.13 ppm, 340 ug/m^3, not to be exceeded more than once per year, based upon twenty-four hour average concentrations.

4.2 The Secondary Ambient Air Quality Standards for Sulfur Oxides measured as Sulfur Dioxide are as follows:

a. An annual arithmetic mean of 0.02 parts per million (ppm), 60 micrograms per cubic meter (ug/m), not to be exceeded, based upon twenty-four hour average concentrations.

b. A value of 0.1 parts per million (ppm), 260 ug/m^3, not to be exceeded more than once per year, based upon twenty-four hour average concentrations.

c. A value of 0.5 parts per million by volume, 1300 micrograms per cubic meter, not to be exceeded more than once per year, based upon three hour average concentrations.

Section 5 - Carbon Monoxide

5.1 The average concentration of carbon monoxide taken over any consecutive eight (8) hours shall not exceed a value of eight (8) parts per million

by volume (9.2 milligrams per cubic meter) more than one tenth of one percent (0.1%) of the time on an annual basis.

5.2 The average concentration of carbon monoxide taken over any consecutive eight (8) hours shall not exceed a value of twelve (12) parts per million by volume (13.8 milligrams per cubic meter).

5.3 The average concentration of carbon monoxide taken over any one (1) hour period shall not exceed thirty-five (35) parts per million by volume (40 milligrams per cubic meter).

Section 6 - Photochemical Oxidants

6.1 The average concentration of photochemical oxidants taken over any one (1) hour period shall not exceed a value of eight one-hundredths (0.08) parts per million by volume (160 micrograms per cubic meter) more than once per year.

6.2 The average concentration of photochemical oxidants taken over any one (1) hour period shall not exceed a value of one tenth (0.1) part per million by volume (200 micrograms per cubic meter).

Section 7 - Hydrocarbons

7.1 The hydrocarbons standards in subsection 7.2 and 7.3 are for use as a guide in devising implementation plans to achieve oxidant standards.

7.2 The average concentration of hydrocarbons, exclusive of methane, taken over a three (3) hour period from 6:00 to 9:00 a.m., local time, shall not exceed two tenths (0.2) parts per million (as carbon) by volume (131 micrograms per cubic meter) more than once a year.

7.3 The average concentration of hydrocarbons, exclusive of methane, taken over the three (3) hour period from 6:00 to 9:00 a.m., local time, shall not exceed three tenths (0.3) parts per million by volume (196.5 micrograms per cubic meter).

Section 8 - Nitrogen Dioxide

8.1 The annual arithmetic mean concentration of nitrogen dioxide shall not exceed 0.05 parts per million (100 micrograms per cubic meter).

Section 9 - Hydrogen Sulfide

9.1 The average concentration of hydrogen sulfide taken over any consecutive three (3) minutes shall not exceed 0.06 ppm.

9.2 The average concentration of hydrogen sulfide taken over any consecutive 60 minutes shall not exceed 0.03 ppm.

REGULATION NO. IV

PARTICULATE EMISSIONS FROM FUEL BURNING EQUIPMENT

Section 1 - General Provisions

1.1 The emission of particulate matter from fuel burning equipment shall be controlled to a limit that shall meet the ambient air quality requirements.

1.2 The provisions of this Regulation shall not apply where the heat input to the equipment is less than 1,000,000 BTU per hour.

1.3 The provisions of this Regulation shall not apply to equipment or operations whose emissions are controlled by Regulation No. V or Regulation No. VII.

1.4 For purposes of this Regulation, the heat input value shall be based upon the manufacturer's guaranteed maximum input or the Department's calculated input.

1.5 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Emission Limits

2.1 No person shall cause or allow the emission of particulate matter in excess of 0.3 pounds per million BTU heat input, maximum 2-hour average, from any unit of fuel burning equipment.

REGULATION NO. V

PARTICULATE EMISSIONS FROM INDUSTRIAL PROCESS OPERATIONS

Section 1 - General Provisions

1.1 The emission of particulate matter from industrial process equipment shall be controlled to a limit that shall meet the ambient air quality requirements.

1.2 The provisions of this Regulation shall not apply to indirect heat exchangers which shall be controlled by Regulation No. IV.

1.3 For all tables in this Regulation, unless otherwise indicated, the emission limitation for a process weight rate between any two consecutive process weight rates shall be determined by linear interpolation.

1.4 For all tables in this Regulation, unless otherwise indicated, the emission limitation for a process weight rate above the maximum process weight rate or below the minimum process weight rate shall be determined by linear extrapolation.

1.5 For purposes of this Regulation, the allowable mass emission rate of particulate matter shall be determined for individual units of equipment.

1.6 For operations involving similar units which are manifolded to a common stack, control techniques shall be such that no unit is emitting particulate matter at a rate which is in excess of the mass emission rate allowed by this Regulation.

1.7 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - General Restrictions

2.1 No person shall cause or allow particulate emissions into the atmosphere from any source not provided for in subsequent sections of this Regulation in excess of 0.2 grains per standard cubic foot.

Section 3 - Restrictions on Hot Mix Asphalt Batching Operations

3.1 No person shall cause or allow particulate emissions from a hot mix asphalt batching plant into the atmosphere in excess of the quantity as listed in Table 1.

TABLE 1

ALLOWABLE MASS EMISSION RATE FROM
HOT MIX ASPHALT BATCHING OPERATION

Process Weight Rate (Pounds Per Hour)	Stack Emission Rate (Pounds Per Hour)
10,000	10
20,000	16
30,000	22
40,000	28
50,000	31
100,000	33
200,000	37
300,000	40
400,000	43
500,000	47
600,000	50

Section 4 - Restrictions on Secondary Metal Operations*

4.1 No person shall cause or allow particulate emissions from secondary metal operations into the atmosphere in excess of the quantity as listed in Table 2.

TABLE 2

ALLOWABLE MASS EMISSION RATE
FROM SECONDARY METAL OPERATIONS

Process Weight Rate (Pounds Per Hour)	Stack Emissions Rate (Pounds Per Hour)
1,000	0.75
2,000	1.50
3,000	2.25
4,000	3.00
5,000	3.75
6,000	4.50
7,000	5.25
8,000	6.00
9,000	6.75
10,000	7.50
12,000	9.00
16,000	12.00
18,000	13.50
20,000	15.00
30,000	22.50
40,000	30.00
50,000	37.50

4.2 The provisions of Section 4.1 shall not apply to electric arc furnaces, and their associated dust-handling equipment, with a capacity of more than 100 tons.

*Variance for the Phoenix Steel Corp. in Claymont
See non-regulatory Federal Register Publication 7/30/79

Section 5 - Restrictions on Petroleum Refining Operations

5.1 No person shall cause or allow particulate emissions from catalytic cracking operations into the atmosphere in excess of the quantities as indicated in Table 3.

TABLE 3

ALLOWABLE MASS EMISSION RATE
FROM CATALYTIC CRACKING OPERATIONS

Coke Burn-Off Rate (Pounds Per Hour)	Mass Emission Rate (Pounds Per Hour)
7,000	50
14,000	100
21,000	150
28,000	200
42,000	300
56,000	400
70,000	500

For the purpose of interpolation and extrapolation calculations, "Coke Burn-Off Rate" shall be construed to be equivalent to "Process Weight Rate".

5.2 No person shall cause or allow particulate emissions from fluid coking operations into the atmosphere in excess of the quantities as indicated in Table 5.

TABLE 5

ALLOWABLE MASS EMISSION RATE
FROM FLUID COKING OPERATIONS

Process Weight Rate (Barrels Per Day)	Mass Emission Rate (Pounds Per Hour)
5,000	15
10,000	30
15,000	50
20,000	70
30,000	100
40,000	125
50,000	150

Section 6 - Restrictions on Prill Tower Operations

6.1 No person shall cause or allow particulate emissions from prilling operations into the atmosphere in excess of the quantities as indicated in Table 6.

TABLE 6

ALLOWABLE MASS EMISSION RATE
FROM PRILLING OPERATIONS

Process Weight Rate (Pounds Per Hour)	Mass Emission Rate (Pounds Per Hour)
5,000	25
10,000	50
15,000	75
20,000	100
25,000	125
50,000	250
75,000	375
100,000	500

Section 7 - Control of Potentially Hazardous Particulate Matter

7.1 Persons responsible for a source operation from which potentially hazardous particulate matter may be emitted such as, but not limited to, lead, arsenic, beryllium, silica, asbestos, and other such materials shall list such contaminants and their exit concentrations in a written report to the Department. The Department shall assign emission limits on an individual basis.

REGULATION NO. VI

PARTICULATE EMISSIONS FROM CONSTRUCTION AND MATERIALS HANDLING

Section 1 - General Provisions

1.1 The purpose of this Regulation is to control particulate emissions from construction and materials handling operations to a limit so as not to cause a condition of air pollution.

Section 2 - Demolition

2.1 No person shall cause or allow the demolition of existing structures, buildings, or parts of buildings, in New Castle County or in incorporated areas of Kent and Sussex Counties unless methods are employed to control dust emissions.

2.2 Such methods may include the application of water or the use of other techniques approved by the Department.

2.3 The restriction of Subsection 2.1 may be extended to unincorporated areas of Kent and Sussex Counties in situations where the Department determines that demolition activities could emit dust in quantities sufficient to cause air pollution.

Section 3 - Grading, Land Clearing, Excavation and Use of Non-Paved Roads

3.1 No person shall cause or allow land clearing, land grading (including grading for roads), excavation, or the use of non-paved roads on private property unless methods, as indicated in Subsection 2.2, are employed to control dust emissions, when the Department determines that such activities could emit dust in quantities sufficient to cause air pollution.

Section 4 - Material Movement

4.1 No person shall cause or allow visible particulate emissions of any material being transported by a motor vehicle.

Section 5 - Sandblasting

5.1 No person shall cause or allow sandblasting or related abrasion operations unless sufficient containment measures are taken to prevent the sand and/or abrasive material from traveling beyond the property line where the operation is being conducted.

Section 6 - Material Storage

6.1 No person shall cause or allow stockpiling or other storage of material or transport to or from a storage facility in such a manner as may cause a condition of air pollution.

REGULATION NO. VII

PARTICULATE EMISSIONS FROM INCINERATION

Section 1 - General Provisions

1.1 The provisions of Sections 1 and 2 of this Regulation shall not apply to incineration operations disposing of refuse at a rate greater than 3,000 pounds per hour. Control for such operations will be specified individually by the Department.

1.2 The provisions of this Regulation shall not apply to open-pit incinerators. Control for such operations will be specified on an individual basis by the Department.

1.3 The provisions of this Regulation shall not apply to incinerators which are used exclusively for experimentation. Control of such units will be specified on an individual basis by the Department.

1.4 The allowable mass emission rate for a charging rate between any two consecutive charging rates shall be determined by linear interpolation from Table 1.

1.5 The allowable mass emission rate for a charging rate below the minimum charging rate shall be determined by linear extrapolation from Table 1.

1.6 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Restrictions

2.1 No person shall cause or allow particulate emissions from refuse incinerators into the atmosphere in excess of the appropriate mass emission rate indicated in Table 1.

TABLE 1

ALLOWABLE MASS EMISSION RATE FROM REFUSE INCINERATION EQUIPMENT

Charging Rate (Pounds Per Hour)	Mass Emission Rate (Pounds Per Hour)
100	0.2
200	0.4
300	0.6
400	0.8
500	1.0
1,000	2.0
2,000	3.5
3,000	5.0

2.2 No person shall cause or allow the construction of any new incinerator except for the disposal of:

a. Pathological waste

b. Contaminated waste

c. Industrial waste or sludge in specific instances where no other method of disposal is acceptable to the Secretary.

d. Composted refuse or sludge from sewage treatment plants specifically prepared for incineration.

REGULATION NO. VIII

SULFUR DIOXIDE EMISSIONS FROM FUEL BURNING EQUIPMENT

Section 1 - General Provisions

1.1 The emission of sulfur dioxide from fuel burning equipment shall be controlled to a limit that shall meet the ambient air quality requirements.

1.2 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

1.3 This Regulation shall not apply to fuels used in fluid coking or catalyst regeneration.

1.4 This Regulation shall not apply to fuels used by watercraft.

Section 2 - Limit on Sulfur Content of Fuel

2.1 No person shall offer for sale, sell, or purchase any fuel having a sulfur content greater than one (1.0) percent by weight when such fuel is intended for use in any fuel burning equipment in New Castle County. No person shall use any fuel having a sulfur content greater than one (1.0) percent by weight in any fuel burning equipment in New Castle County.

2.2 No person shall offer for sale, sell, purchase or use in any fuel burning equipment, distillate fuel oil having a sulfur content greater than 0.3 percent by weight.

Section 3 - Emission Control in Lieu of Sulfur Content Limits of Section 2

3.1 The limits on sulfur content established by Section 2 shall not apply to any fuel burning equipment employing emission control which limits sulfur dioxide emission to that which would result from burning, without emission control, a fuel permitted by Section 2. In order to employ an emission control rather than sulfur content limits as a means of complying with this Regulation, an owner or operator of fuel burning equipment must demonstrate to the Department in advance that the equivalent emission will be achieved.

REGULATION NO. IX

SULFUR DIOXIDE EMISSIONS FROM INDUSTRIAL OPERATIONS

Section 1 - General Provisions

1.1 The emission of sulfur dioxide from process operations shall be controlled to a limit that shall meet the ambient air quality requirements.

1.2 For all tables in this Regulation, unless otherwise indicated, the emission limitation for a production rate between any two consecutive production rates shall be determined by linear interpolation.

1.3 For all tables in this Regulation, unless otherwise indicated, the emission limitation for a production rate above the maximum production rate or below the minimum production rate shall be determined by linear extrapolation.

1.4 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Restrictions on Sulfuric Acid Manufacturing Operations

2.1 No person shall cause or allow the emission of sulfur dioxide in the tail gases from any existing sulfuric acid manufacturing operation to exceed either a concentration of 1,000 parts per million by volume or a mass emission rate as specified in Table 1.

TABLE 1

ALLOWABLE MASS EMISSION RATE OF SULFUR DIOXIDE FROM EXISTING SULFURIC ACID MANUFACTURING OPERATIONS

Production Rate (Tons Per Day)	Mass Emission Rate (Pounds Per Hour)
100	75
300	210
500	345
700	480
900	615
1100	750
1300	885
1500	1020

2.2 No person shall cause or allow the emission of sulfur dioxide in the tail gases from new sulfuric acid manufacturing operations to exceed either a concentration of 500 parts per million by volume or a mass emission rate as specified in Table 2.

TABLE 2

ALLOWABLE MASS EMISSION RATE OF SULFUR DIOXIDE FROM NEW SULFURIC ACID MANUFACTURING OPERATIONS

Production Rate (Tons Per Day)	Mass Emission Rate (Pounds Per Hour)
100	38
300	105
500	173
700	240
900	308
1100	375
1300	443
1500	510

Section 3 - Restriction on Sulfur Recovery Operations

3.1 No person shall cause or allow the emission of sulfur dioxide in the tail gases from existing sulfur recovery operations to exceed either a concentration of 2,000 parts per million by volume or a mass emission rate as specified in Table 3.

TABLE 3

ALLOWABLE MASS EMISSION RATE OF SULFUR DIOXIDE FROM SULFUR RECOVERY OPERATIONS

Production Rate (Tons Per Day)	Mass Emission Rate (Pounds Per Hour)
50	425
100	550
200	800
300	1050
400	1300
500	1550
600	1800
700	2050
800	2300
900	2550
1000	2800

3.2 No person shall cause or allow the emission of sulfur dioxide in the tail gases from new sulfur recovery operations to exceed either a concentration of 2,000 parts per million by volume or a mass emission rate as specified in Table 3.

Section 4 - Stack Height Requirements

4.1 Minimum stack heights for new sources of sulfur dioxide will be determined by the Department on an individual basis. Such stack height requirements will be based on considerations such as, but not limited to, existing ambient levels of sulfur dioxide, local sources, atmospheric dispersion calculations, land use, and population density.

REGULATION NO. X

CONTROL OF SULFUR DIOXIDE EMISSIONS
KENT AND SUSSEX COUNTIES

Section 1 - Requirements for Existing Sources of Sulfur Dioxide

1.1 If in the course of field investigations the Department determines that the ambient air standards for sulfur dioxide are being exceeded, the Department shall determine the sources responsible for the excess levels of sulfur dioxide. The Department shall determine the reductions required to attain stated air quality standards on the basis of such equitable methods as the Department may establish. In the Department's deliberations on how the reductions will be attained, it shall make use of appropriate provisions in Section 2 of this Regulation and shall also consider the relative contributions of different emission sources.

Section 2 - Requirements for New Sources of Sulfur Dioxide

2.1 The mass emission rate of sulfur dioxide from any individual source, for example, combustion operations or manufacturing processes, shall be determined by acceptable atmospheric dispersion equations in order to meet the air quality standards contained in Regulation III.

2.2 Where multiple sources of sulfur dioxide may occur, either due to the building of multiple sources, or the building of a single new source on the property adjacent to an existing source or sources, the Department will consider the additive effect due to the proximity of the source or sources to each other or to other existing sources in judging whether the ambient air quality standards may thus be exceeded. In such instances, the Department may require a discharge of less sulfur dioxide to the atmosphere for the new source than would be considered permissible from the "Engineering Guides".

2.3 Emissions of sulfur dioxide from watercraft and from sources where less than 3.0 pounds per hour of sulfur dioxide are discharged, are excluded from the provisions of this Regulation.

2.4 Any operation whose emissions are also controlled by Regulation No. IX shall be subject to the more restrictive of the two Regulations.

REGULATION NO. XI

CARBON MONOXIDE EMISSIONS FROM INDUSTRIAL PROCESS OPERATIONS

NEW CASTLE COUNTY

Section 1 - General Provisions

1.1 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Restrictions on Petroleum Refining Operations

2.1 In New Castle County, no person shall cause or allow the emission of carbon monoxide from any catalytic regeneration of a petroleum cracking system, petroleum fluid coker, or other petroleum process into the atmosphere, unless the carbon monoxide is burned at 1300°F for 0.3 seconds or greater in a direct-flame afterburner or boiler, or is controlled by an equivalent technique.

REGULATION NO. XII

NITROGEN OXIDE EMISSIONS FROM FUEL BURNING EQUIPMENT

NEW CASTLE COUNTY

Section 1 - General Provisions

1.1 The provisions of this Regulation shall not apply where the heat input to the equipment is less than 500 million BTU per hour.

1.2 The provisions of this Regulation shall not apply to fuel burning equipment when the heat produced in such equipment is used for some purpose other than the production of steam.

1.3 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Emission Limits in New Castle County

2.1 After July 1, 1976 no person shall cause or allow the emission of nitrogen oxides from fuel burning equipment in New Castle County in excess of the following limits:

a. From fuel burning equipment fired with gas: 0.2 pounds per million BTU of heat input, maximum 2-hour average.

b. From fuel burning equipment fired with fuels other than gas:

0.3 pounds per million BTU of heat input, maximum 2-hour average.

2.2 Emissions of nitrogen oxides shall be calculated as nitrogen dioxide for the purposes of this Regulation.

2.3 When different fossil fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration based on percent of total heat input derived from each fuel.

REGULATION NO. XIII

OPEN BURNING

Section 1 - General Provisions

1.1 The following operations are not subject to this Regulation:

a. Fires used only for cooking of food for human beings;

b. Fires used for recreational purposes;

c. Flares.

Section 2 - General Restrictions

2.1 No person shall cause or allow the disposal of refuse by open burning.

2.2 No person shall cause or allow open burning in the conduct of a salvage operation.

2.3 No person shall cause or allow open burning in the area north of the Chesapeake and Delaware Canal or within the corporate limits of any municipality except for purposes of agricultural operations which shall require the prior written approval of the Department.

2.4 No person shall cause or allow any other open burning operation without the prior written approval of the Department except as provided in Section 4 and 5 of this Regulation.

2.5 Prior to approving any open burning operation the Department shall consider the following factors:

a. Distance from the nearest populated area;

b. Distance from any roadway;

c. Distance from any military, commercial, county, municipal, or private airport or landing strip;

d. Distance from areas of high public use where a large number of people may congregate such as a national reservation, state park, wildlife area, or state forest;

e. Number of residences in the immediate vicinity of the operation; and

f. The time at which the operation is to be conducted.

2.6 Open burning shall not be approved by the Department if:

a. It will cause a condition of air pollution; or

b. It will interfere with the attainment or maintenance or any air quality standard specified in Regulation No. III.

2.7 No person shall cause or allow approved open burning when, in the judgment of the Department:

a. Adverse meteorological conditions exist, or

b. Ambient air quality will be adversely affected.

2.8 This Section shall not regulate:

a. Open burning for plant disease or pest control, which shall be regulated by Section 3 of this Regulation.

b. Open burning for fire fighting exercises, which shall be regulated by Section 4 of this Regulation.

c. Domestic burning, which shall be regulated by Section 5 of this Regulation.

Section 3 - Open Burning for Plant Disease or Pest Control

3.1 No person shall cause or allow burning for plant disease or pest control prior to obtaining the written approval of the Department. Approval shall not be granted unless the applicant has documented to the satisfaction of the Department that destruction by fire is the only effective means of control.

Section 4 - Open Burning for Fire Fighting Exercises

4.1 Open burning for fire fighting instruction conducted at the Delaware State Fire School Training Center shall not be subject to this Regulation.

4.2 No person shall cause or allow open burning for fire fighting instruction at locations other than the Fire Training Center unless such operation meets with the following requirements:

a. A written request has been made to the State Fire School Director; and

b. Prior notification has been given to the Department; and

c. The fire fighting instruction is supervised by an instructor approved by the State Fire School.

4.3 No person shall cause or allow open burning for the removal of a fire hazard unless such operation meets the following requirements:

a. A written recommendation as to the necessity of the operation has been obtained from the State Fire Marshal; and

b. Prior notification has been given to the Department; and

c. A fire company is present during the entire operation.

Section 5 - Domestic Burning

5.1 No person shall cause or allow the open burning of leaves north of the Chesapeake and Delaware Canal.

5.2 Except as limited by Section 5.1, domestic burning may be conducted without prior approval subject to the following restrictions:

a. No person shall cause or allow domestic burning except between the hours of 10:00 a.m. and 4:00 p.m., local time.

b. No person shall cause or allow domestic burning when a burning ban has been declared by the State Fire Marshal.

c. No person shall cause or allow domestic burning when an Air Stagnation Advisory exists as issued by the Department.

d. No person shall cause or allow domestic burning unless it is conducted as far as practicable from adjacent properties.

e. No person shall cause or allow domestic burning in such a manner as to prevent attainment or maintenance of any air quality standard specified in Regulation No. III or to cause air pollution.

REGULATION NO. XIV

VISIBLE EMISSIONS

Section 1 - General Provisions

1.1 The purpose of this regulation is to control the emissions of visible air contaminants from all stationary sources except electric arc furnaces and their associated dust-handling equipment as set forth in Section 2.2.

1.2 Measurements of air contaminant visibility shall be in accordance with accepted practices of Ringelmann values or opacity percentages.

1.3 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

Section 2 - Requirements*

2.1 No person shall cause or allow the emission of visible air contaminants and/or smoke from a stationary source, the shade or appearance of which is greater than either a Number 1 of the Ringelmann Smoke Chart or twenty (20%) percent opacity for an aggregate of more than three (3) minutes in any one (1) hour or more than fifteen (15) minutes in any twenty-four (24) hour period.

2.2 The requirements of Section 2.1 shall not apply to electric arc furnaces, and their associated dust-handling equipment, with a capacity of more than 100 tons which are governed by Regulation No. XXIII.

* Variance for the Phoenix Steel Corp in Claymont
See non-regulatory 7/30/79 Federal Register Publication

REGULATION NO. XV

AIR POLLUTION ALERT AND EMERGENCY PLAN

Section 1 - General Provisions

1.1 Air Pollution Emergency Plans are required to assure that during adverse weather conditions air contaminants in the atmosphere shall not increase in concentration to a degree that would be detrimental to the health, welfare and safety of the population.

1.2 Whenever the Department determines that the conditions of Section 2 have been met at any single air quality monitoring station in the State of Delaware, the applicable stage of this plan shall be declared by the Department for that Air Quality Region in which the monitoring station is located.

1.3 To assure compliance with this Regulation, sources designated by the Department shall submit Standby Plans in accordance with Section 4 or this regulation.

Section 2 - Stages and Criteria

2.1 Air Pollution Watch - An Air Pollution Watch shall be activated by the Department when the National Weather Service issues an Air Stagnation Advisory which includes areas of the State of Delaware or when the Department Meteorologist forecasts an air stagnation period for the State, and when such air stagnation is forecast to continue for the next 36 hours.

2.2 Alert-Stage I - An Alert-Stage I status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional twelve hours:

a. The 6-hour average concentration of sulfur dioxide is equal to or exceeds 0.30 parts per million.

b. The 6-hour average of soiling index is equal to or exceeds 4.0 COHS.

c. The product of the 24-hour average ambient air concentration of sulfur dioxide in parts per million and the 24-hour average soiling index in COHS is equal to or exceeds 0.50 parts per million COHS.

d. The 24-hour average concentration of nitrogen dioxide is equal to or exceeds 0.20 parts per million.

2.3 Alert-Stage II - An Alert-Stage II status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional twelve hours:

a. The 6-hour average concentration of sulfur dioxide is equal to or exceeds 0.50 parts per million.

b. The 6-hour average of soiling index is equal to or exceeds 6.0 COHS.

c. The product of the 24-hour average ambient air concentration of sulfur dioxide in parts per million and the 24-hour average soiling index in COHS is equal to or exceeds 0.90 parts per million - COHS.

d. The 4-hour average concentration of ozone is equal to or exceeds 0.25 parts per million.

e. The 24-hour average concentration of nitrogen dioxide is equal to or exceeds 0.30 parts per million.

f. The 8-hour average of carbon monoxide is equal to or exceeds 30.0 parts per million.

2.4 Alert-Emergency Stage - An Alert-Emergency Stage status shall be declared when any one of the following conditions occur at any air quality monitoring station in the State of Delaware and when a condition of air stagnation is forecast to continue for at least an additional twelve hours.

a. The 24-hour average concentration of sulfur dioxide is equal to or exceeds 0.60 parts per million.

b. The 24-hour average of soiling index is equal to or exceeds 7.0 COHS.

c. The product of the 24-hour average ambient air concentration of sulfur dioxide in parts per million and the 24-hour average soiling index in COHS is equal to or exceeds 1.40 parts per million - COHS.

d. The 8-hour average concentration of carbon monoxide is equal to or exceeds 40.0 parts per million.

e. The 4-hour average concentration of ozone is equal to or exceeds 0.35 parts per million.

f. The 24-hour average concentration of nitrogen dioxide is equal to or exceeds 0.40 parts per million.

2.6 Termination - Once declared, any status reached by application of the criteria will remain in force until the criteria for that status are no longer met. At such time the applicable lower status shall be declared. Termination shall be declared when concentrations are less than Stage I and a weather advisory has been received that the air stagnation period is ended.

Section 3 - Required Actions

1. Air Pollution Watch - The Department shall initiate an increased continuous watch of the air quality values at the air quality monitoring stations and shall inform the public and major industries of the situation.

TABLE 1
EMISSION REDUCTION OBJECTIVES

Source	Alert - Stage I
1. Coal or oil-fired electric power generating facilities.	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department. c. Substantial reduction by diverting electric power generation to facilities outside an Alert Area.
2. Coal or oil-fired generating facilities having a capacity to burn in excess of four tons of coal or 600 gallons of oil per hour.	a. Substantial reduction by utilization of fuels having low ash and sulfur content. b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department. c. Substantial reduction of steam load demands consistent with continuing plant operations.
3. A. Manufacturing industries of the following classifications which employ twenty employees at one location: Primary Metals Petroleum Refining & Related Chemical & Allied Products; Plastic Paper & Allied Products; Glass, Clay and Hot Mix Plants; AND B. Other persons required by the Department to prepare plans.	a. Substantial reduction of air contaminants for manufacturing operations by curtailing, postponing, or deferring production and allied operations. b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.

3.2 Alert-Stage I

a. There shall be no open burning by any person;

b. The use of incinerators for the disposal of solid or liquid waste shall be limited to the hours specified by the Department, and plans for the alternate disposal methods will be formulated;

c. Persons operating fuel burning equipment which requires boiler lancing and soot blowing shall perform such operations only between the hours specified by the Department;

d. Any person responsible for the operation of a source of air contamination as set forth in Table 1 shall take all Air Pollution Alert - Stage I actions as required for such source of air contamination; and shall particularly put into effect the standby plans for Alert - Stage I status.

3.3 Alert-Stage II

a. There shall be no open burning by any person;

b. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited;

c. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours specified by the Department;

d. Any person responsible for the operation of a source of air contamination as set forth in Table II, shall take all Air Pollution Alert - Stage II actions as required for such source of air contamination; and shall particularly put into effect the standby plans for Alert - Stage II status.

3.4 Alert-Emergency Stage

a. There shall be no open burning by any person;

b. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited;

c. Any person responsible for the operation of a source of air contamination as set forth in Table III shall take all Alert-Emergency Stage actions as required for such source of air contamination, and shall particularly put into effect the standby plans for Alert - Emergency Stage;

TABLE II
EMISSION REDUCTION OBJECTIVES

Source	Alert - Stage II
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content. b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department. c. Maximum reduction by diverting electric power generation to facilities outside Alert Area.
2. Coal or oil-fired generating facilities having a capacity to burn in excess of four tons of coal or 600 gallons of oil per hour.	a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content. b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department. c. Making ready for use a plan of action to be taken if an emergency develops.
3. A. Manufacturing industries of the following classifications which employ twenty employees at one location: Primary Metals Petroleum Refining & Related Chemical & Allied Products; Plastic Paper & Allied Products; Glass, Clay and Hot Mix Plants; AND B. Other persons required by the Department to prepare plans.	a. Maximum reduction of air contaminants for manufacturing operations by, if necessary, assuming economic hardship by postponing production and allied operations. b. Maximum reduction by deferring trade waste disposal operations which emit particles, gases, vapors, or malodorous substances. c. Maximum reduction of heat load demands for processing. d. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department.

TABLE III
EMISSION REDUCTION OBJECTIVES

Source	Alert - Emergency Stage
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content. b. Maximum utilization of atmospheric mixing for boiler lancing and soot blowing at times to be specified by the Department. c. Maximum reduction by diverting electric power generating to facilities outside of Alert Area.
2. Coal or oil-fired process steam generating facilities having a capacity to burn in excess of four tons of coal or 600 gallons of oil per hour.	a. Cease operation.
3. A. Manufacturing industries of the following classifications which employ twenty employees at one location: Primary Metals Petroleum Refining & Related Chemical & Allied Products; Plastic Paper & Allied Products; Glass, Clay and Hot Mix Plants; AND B. Other industries required by the Department to prepare plans.	a. Cease operation.

d. All places of employment below shall immediately cease operations:

1. Mining and quarrying of non-metallic minerals;

2. All contract construction work except that which must proceed to avoid physical harm;

3. Wholesale trade establishments, i.e., places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies;

4. All offices of local, county, and state government including authorities, joint meetings and any other public body, except to the extent that such offices must continue to operate in order to enforce the requirements of this order pursuant to statute;

5. All retail trade establishments except pharmacies and stores primarily engaged in the sale of food;

6. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, real estate offices;

7. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios, beauty shops, barber shops; shoe repair shops;

8. Advertising offices, consumer credit reporting, adjustment and collection agencies, duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services, equipment rental services, commercial testing laboratories;

9. Automobile repair, automobile services, garages;

10. Establishments rendering amusement and recreation services including motion picture theatres;

11. Elementary and secondary schools, junior colleges, vocational schools, and public and private libraries.

e. The use of motor vehicles is prohibited except in emergencies as determined by local and state police and the Department;

f. All other manufacturing establishments not mentioned in Section 3.4 (a-e) will institute such actions as will reduce air contaminants from their operation by ceasing or curtailing operations which emit air contaminants to the maximum extent possible without causing injury to persons or serious damage to equipment.

Section 4 - Standby Plans

4.1 Any person responsible for the operation of a source of air contamination set forth in Table I or, any other person when requested by the Department in writing, shall prepare standby plans, consistent with good industrial practice and safe operating procedures, for reducing the emission of air contaminants into the ambient air during periods of an Alert-Stages I and II and Alert - Emergency Stage. Standby Plans shall be designed to reduce or eliminate emissions of air contaminants into the outdoor atmosphere in accordance with objectives set forth in Tables I, II, and III and shall be approved by the Department.

4.2 Standby Plans, as required under Section 4.1, shall be in written form and show the location of the source of air contamination, the approximate amount of reduction of contaminants, and a brief description of the manner in which the reduction will be achieved during an Alert-Stages I and II and Alert-Emergency Stage.

4.3 Standby Plans, as required by this Section, shall be submitted to the Department upon request within thirty days of the receipt of such request. If, in the opinion of the Department, any standby plan does not effectively carry out the objectives as set forth in Table I, II, and III, the Department may disapprove said plan, state the reason for disapproval and order the preparation of an amended standby plan within the time specified in the order.

REGULATION NO. XVI

SOURCES HAVING AN INTERSTATE AIR POLLUTION POTENTIAL

Section 1 - General Provisions

1.1 Air contaminant emissions within the jurisdication of the State of Delaware must be controlled to the extent that a neighboring state regulation shall not be compromised.

1.2 Nothing contained in this Regulation shall be construed as to allow to a lesser degree of control as may be required by an additional Regulation adopted by the Department.

Section 2 - Limitations

2.1 This Regulation shall apply to air contaminant sources only when the following factors are satisfied:

a. The receptor state has adopted a similar, reciprocal measure.

b. The receptor state has adopted ambient air quality criteria or standards for the area and air contaminant in question and had demonstrated that such measures are being enforced.

c. The receptor state demonstrates, to the satisfaction of the Department that a source within the State of Delaware is substantially affecting such established criteria or standards.

Section 3 - Requirements

3.1 The Department shall require existing sources of air contaminants, whose emissions are carried into a neighboring state, to control their emissions to such an extent as to not substantially affect the ambient air quality in the receptor state.

3.2 All new sources of air contaminants, whose emissions are carried into a neighboring state, shall control their emissions to such an extent as to not substantially affect the ambient air quality of the receptor state.

REGULATION NO. XVII

SOURCE MONITORING, RECORD KEEPING AND REPORTING

Section 1 - Sampling and Monitoring

1.1 Upon written request of the Department, an owner or operator of an air contaminant source shall, at his expense, install, maintain, and use emission monitoring devices, keep records, and make periodic reports to the Department on the nature and amounts of emissions from such source. The Department shall make such data available to the public as reported and as correlated with any applicable emission standards or limitations.

1.2 Upon written request of the Department, an owner or operator of an air contaminant source shall, at his expense, sample the emissions of, or fuel used by, that source, maintain records and submit reports to the Department on the results of such sampling. The Department may make such data available to the public as reported and as correlated with any applicable emission standards or limitations.

1.3 The Department may conduct tests of emissions from or fuel used by any air contaminant source. Upon written request of the Department, the owner or operator of the air contaminant source shall provide necessary holes in stacks or ducts, and such other safe and proper sampling and testing facilities, exclusive of instruments and sampling devices, if any be necessary, for proper determinations of the emission of air contaminants. The Department shall have access to and use of monitoring, record-keeping and reporting required by Federal Regulations relating to emissions of air contaminants. The Department may make such data available to the public as reported or received and as correlated with any applicable emission standards or limitations.

1.4 All instrumentation, analytical techniques, calculations, records, and sampling locations and methods required by this Regulation shall have the prior approval of the Department.

1.5 Reports required by this Regulation shall be submitted in a form approved by the Department and shall be signed by a corporate officer or his designee whose signature shall constitute his own and his employer's certification that the data are accurate and complete.

Section 2 - Minimum Emission Monitoring Requirements for Existing Sources

2.5 Electric arc furnaces - See Regulation No. XXIII.

REGULATION NO. XVIII

PARTICULATE EMISSIONS FROM GRAIN HANDLING OPERATIONS

Section 1 - Particulate Emissions from Grain Dryers and Corn Shellers

1.1 No grain dryer or corn sheller shall emit particulate matter larger in size than that which will pass through a 24 mesh screen (Tyler Scale) or equivalent. The technique used for controlling these emissions need not be by screening but must provide particulate emission control equivalent to that which would be obtained by the use of 24 mesh screen.

1.2 On or before September 1, 1974, all owners of grain dryers or corn shellers shall control particulate emissions in accordance with Section 1.1.

1.3 Any new grain dryer or corn sheller constructed after the effective date of this Regulation shall comply with the emission limitation of Section 1.1.

1.4 Any installation consisting of only a single grain dryer with a capacity of less than 500 bushels per hour at 5% moisture reduction is exempt from this regulation. In-bin grain dryers are exempt from this Regulation.

Section 2 - Restrictions for Chaff, Husks, and Cobs

2.1 No grain dealer or grain handler shall cause or allow storage, accumulation, or collection of chaff, husks, cobs or other particulate matter from grain unless these particulates are contained in enclosures with openings not larger than the equivalent of 24 mesh screen (Tyler Scale).

2.2 No grain dealer or handler shall move or allow to be moved, chaff, husks, or cobs from any grain, unless precautions are taken to prevent unnecessary escape of these materials during transfer.

2.3 On or before September 1, 1974, all owners of facilities for storage accumulation or collection of chaff, husks, cobs or other particulate matter from grain shall comply with the provisions of Section 2.1 of this Regulation.

2.4 Any new facility for storage, accumulation or collection of chaff, husks, cobs or other particulate matter from grain, constructed after the effective date of this Regulation, shall comply with the emission limitation of Section 2.1.

Section 3 - Registration, Plans of Corrective Action and Permits

3.1 Within 45 days after the effective date of this regulation any owner of any grain dryer, corn sheller or facility for storage, accumulation or collection of chaff, husks, and cobs shall register the installation with the Department of Natural Resources and Environmental Control on forms to be provided by the Department and shall submit a scheduled plan of corrective action acceptable to the Department describing those measures to be taken to control emissions, if necessary to comply with the provisions (Cont'd.)

of this Regulation.

3.2 No person shall construct or operate any grain dryer, corn sheller or facility for storage, accumulation or collection of chaff, husks, and cobs without first obtaining appropriate approval from the Department.

REGULATION NO. XIX

CONTROL OF ODOROUS AIR CONTAMINANTS

Section 1 - General Provisions

1.1 The purpose of this Regulation is to control odorous air contaminants which significantly effect the citizens of the State outside the boundaries of the air contaminant source.

1.2 Methods for determining a condition of air pollution due to an odorous air contaminant may include, but are not limited to, scentometer tests, air quality monitoring, and affidavits from affected citizens and investigators.

Section 2 - Requirements

2.1 No person shall cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution.

REGULATION NO. XXIII

STANDARDS OF PERFORMANCE FOR STEEL PLANTS: ELECTRIC ARC FURNACES

Section 1 - Applicability

1.1 The provisions of this Regulation are applicable to electric arc furnaces over 100 tons capacity and their associated dust-handling equipment in steel plants.

Section 2 - Definitions

2.1 As used in this Regulation, all terms not defined herein shall have the meaning given them in 7 Del. C., Chapter 60 and in Regulation No. 1.

a. "Electric arc furnace" (EAF) means any furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. Furnaces from which the molten steel is cast into the shape of finished products, such as in a foundry, are not applicable facilities included within the scope of this definition. Furnaces which as the primary source of iron, continuously feed prereduced ore pellets are not applicable facilities within the scope of this definition.

b. "Dust-handling equipment" means any equipment used to handle particulate matter collected by the control device and located at or near the control device for an EAF subject to this Regulation.

c. "Control device" means the air pollution control equipment used to remove particulate matter generated by an EAF(s) from the effluent gas stream.

d. "Capture system means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport particulate matter generated by an EAF to the air pollution control device.

e. "Charge" means the addition of iron and steel scrap or other materials into the top of an electric arc furnace.

f. "Charging period" means the time period commencing at the moment an EAF starts to open and ending either three minutes after the EAF roof is returned to its closed position or six minutes after commencement of opening of the roof, whichever is longer.

g. "Tap" means the pouring of molten steel from an EAF.

h. "Tapping period" means the time period commencing at the moment an EAF begins to tilt to pour and ending either three minutes after an EAF returns to an upright position or six minutes after commencing to tilt, whichever is longer.

i. "Meltdown and refining" means that phase of the steel production cycle when charge material is melted and undesirable elements are removed from the metal.

j. "Meltdown and refining period" means the time period commencing at the termination of the initial charging period and ending at the initiation of the tapping period, excluding any intermediate charging periods.

k. "Shop opacity" means the arithmetic average of 24 or more opacity observations of emissions from the shop taken for the applicable time periods in accordance with Method 9 set forth in Appendix A, 40 CFR Part 60, revised July 1, 1975. All sections of Method 9 not previously adopted are hereby adopted by reference.

l. "Heat time means the period commencing when scrap is charged to an empty EAF and terminating when the EAF tap is completed.

m. "Shop" means the building which houses one or more EAFs.

n. "Direct shell evacuation system" means any system that maintains a negative pressure within the EAF above the slag or metal and ducts these emissions to the control device.

Section 3 - Standard for Particulate Matter

3.1 No owner or operator subject to the provisions of this Regulation shall cause to be discharged into the atmosphere from an electric arc furnace any gases which:

a. Exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf).

b. Exit from a control device and exhibit three percent opacity or greater.

c. Exit from a shop and, due solely to operations of any EAF(s), exhibit greater than zero percent shop opacity except:

(i) Shop opacity greater than zero percent, but less than 20 percent, may occur during charging periods.

(ii) Shop opacity greater than zero percent, but less than 40 percent, may occur during tapping periods for no longer than 13 minutes, with an additional 3 minute period of less than 10% opacity.

(iii) Where the capture system is operated such that the roof of the shop is closed during the charge and the tap, and emissions to the atmosphere are prevented until the roof is opened after completion of the charge or tap, the shop opacity standards under paragraph 3.1(c) of this section shall apply when the roof is opened and shall continue to apply for the length of time defined by the charging and/or tapping periods.

3.2 No owner or operator subject to the provisions of this section shall cause to be discharged into the atmosphere from dust-handling equipment any gases which exhibit 10 percent opacity or greater.

Section 4 - Monitoring of Operations

4.1 The owner or operator subject to the provisions of this Regulation shall maintain records daily of the following information:

a. Time and duration of each charge; all records shall be made available to the Department upon request.

b. Time and duration of each tap; all records shall be made available to the Department upon request.

c. All flow rate data obtained under paragraph 4.2 of this section, or equivalent obtained under paragraph 4.4 of this section; and

d. All pressure data obtained under paragraph 4.5 of this section.

4.2 Except as provided under paragraph 4.4 of this section, the owner or operator subject to the provisions of this section shall install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of $\pm$10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Secretary may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of Appendix A.

4.3 When the owner or operator of an EAF is required to demonstrate compliance with the standard under paragraph 3.1(c) of Section 3 and at any other time the Secretary may require the volumetric flow rate through each separately ducted hood shall be determined during all periods in which the hood is operated for the purpose of capturing emissions from the EAF using the monitoring device under paragraph 4.2 of this section. the owner or operator may petition the Secretary for reestablishment of these flow rates whenever the owner or operator can demonstrate to the Secretary's satisfaction that the EAF operating conditions upon which the flow rates were previously established are longer

applicable. The flow rates determined during the most recent demonstration of compliance shall be maintained (or may be exceeded) at the appropriate level for each applicable period. Operation at lower flow rates may be considered by the Secretary to be unacceptable operation and maintenance of the applicable facility.

4.4 The owner or operator may petition the Secretary to approve any alternative method that will provide a continuous record of operation of each emission capture system.

4.5 Where emissions during any phase of the heat time are controlled by use of a direct shell evacuation system, the owner or operator shall install, calibrate, and maintain a monitoring device that continuously records the pressure in the free space inside the EAF. The pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ± 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.

4.6 When the owner or operator of an EAF is required to demonstrate compliance with the standard under paragraph 3.1(c) of Section 3 and at any other time the Secretary may require, the pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) using the monitoring device under paragraph 4.5 of this section. The owner or operator may petition the Secretary for reestablishment of the 15-minute integrated average pressure whenever the owner or operator can demonstrate to the Secretary's satisfaction that the EAF operating conditions upon which the pressures were previously established are no longer applicable. The pressure determined during the most recent demonstration of compliance shall be maintained at all times the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Secretary to be unacceptable operation and maintenance of the applicable facility.

4.7 Where the capture system is designed and operated such that all emissions are captured and ducted to a control device, the owner or operator shall not be subject to the requirements of Section 4.

Section 5 - Test Methods and Procedures

5.1 Except as allowed pursuant to paragraph 4.4 of Section 4, reference methods in Appendix A shall be used to determine compliance with the standards prescribed under Section 3 as follows:

a. Method 5 for concentration of particulate matter and associated moisture content;

b. Method 1 for sample and velocity traverses;

c. Method 2 for velocity and volumetric flow rate; and

d. Method 3 for gas analysis.

5.2 For Method 5, the sampling time for each run shall be at least four hours. When a single EAF is sampled, the sampling time for each run shall also include an integral number of heats. Shorter sampling times, when necessitated by process variables or other factors, may be approved by the Secretary. The minimum sample volume shall be 4.5 dscm (160 dscf).

5.3 For the purpose of this section, the owner or operator shall conduct the demonstration of compliance with paragraph 3.1(c) of Section 3 and furnish the Secretary a written report of the results of the test.

5.4 During any performance test required by this section, no gaseous diluents may be added to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

5.5 When more than one control device serves the EAF(s) being tested, the concentrations of particulate matter shall be determined by dividing the total of the particulate matter discharged from each control device, in mg/dscm, by the total of the volumetric flow rates of each effluent gas stream, in dscm/hour.

5.6 Any control device subject to the provisions of this section shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

5.7 Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this Section but controlled by a common capture system and control device, the owner or operator may use any of the following procedures during a performance test:

a. Base compliance on control of the combined emissions.

b. Utilize a method acceptable to the Secretary which compensates for the emissions from the facilities not subject to the provisions of this section.

c. Any combination of the criteria of paragraphs a. and b. of this paragraph.

5.8 Where emissions from any EAF(s) are combined with emissions from facilities not subject to the provisions of this section, the owner or operator may use any of the following procedures for demonstrating compliance with paragraph 3.1(c) of Section 3:

a. Base compliance on control of the combined emissions.

b. Shut down operation of facilities not subject to the provisions of this section.

c. Any combination of the criteria of paragraphs a. and b. of this paragraph.

REGULATION NO. XXIV

CONTROL OF VOLATILE ORGANIC COMPOUND EMISSIONS

Section 1 - General Provisions

1.1 This Regulation is applicable only to the sources of volatile organic compounds set forth herein except:

A. Sources, other than solvent metal cleaning sources, whose emissions of volatile organic compounds are not more than 10 pounds per day unless other limits are specified herein, provided the emission rates are determined and certified before January 1, 1980 in a manner acceptable to the Department.

B. Sources of methane, ethane, trichlorotrifluoroethane, methyl chloroform or methylene chloride.

C. Sources located in Kent or Sussex Counties.

D. Sanitary landfills conforming to State of Delaware Statewide Solid Waste Management Plan.

1.2 No person shall substitute either methyl chloroform or methylene chloride for any other volatile organic compound for any solvent metal cleaning purpose on or after the effective date of this Regulation.

1.3 The provisions of this Regulation shall not apply to the start-up and shutdown of equipment which operates continuously or in an extended steady state when emissions from such equipment during start-up and shutdown are governed by an operation permit issued pursuant to the provisions of Section 3, Regulation No. II.

1.4 If the National Ambient Air Quality Standard for ozone, or any revision thereof, is achieved in 1982, the Department will reevaluate the need to implement any further requirements of this regulation which are not in effect at that time. Any further VOC emission reduction requirements will be based on a demonstrated need for such requirements to attain or maintain the standard beyond 1982.

1.5 Within 180 days after the effective date of these regulations, any person subject to any final compliance date specified by the provisions of these regulations shall submit to the Department an application for permit to construct, modify or reconstruct and/or operate the required facilities. Such application shall be submitted in accordance with the provisions of Regulation No. II and shall include the dates by which the following interim measures will be implemented to achieve compliance by the date specified in the appropriate section:

A. The date by which required eqipment will be ordered.

B. Th date by which installation of equipment will be ordered.

C. The date by which installation will be completed.

D. Start-up date.

In the event that the applicant's schedule of interim measures is not acceptable, the Department shall give written notice to the applicant, proposing a reasonable schedule of interim measures and advising that the schedule will be ordered unless a hearing is requested on or before a date stated in the notice. The Department may order a schedule to be implemented after considering relevant testimony at the hearing or, if no hearing is requested, issue an order on its own initiative.

Section 2 - Petition for Alternative Controls

(Reserved)

Section 3 - Disposal of Volatile Organic Compounds

(Reserved)

Section 4 - Gasoline Dispensing Facilities - Stage I

4.1 After April 30, 1980, no person shall transfer or permit the transfer of gasoline from any delivery vessel into any stationary storage vessel with a capacity greater than 2,000 gallons located at a gasoline dispensing facility unless such container is equipped with and loaded by means of a permanent submerged fill pipe or by bottom filling. This requirement shall not apply to any gasoline dispensing facilities which is in compliance with the requirements of Section 4.2 on or before April 30, 1980.

4.2 After June 30, 1982, no person shall transfer or permit the transfer of gasoline from any delivery vessel into any stationary storage vessel with a capacity greater than 2,000 gallons located at a gasoline dispensing facility unless:

A. The gasoline vapors and air displaced from the stationary storage vessel during loading are controlled by a vapor balance or recovery system which returns no less than 90% by weight of the gasoline vapors to a vapor-tight delivery vessel, via a vapor-tight collection line; or by an equivalent control system approved by the Department.

B. Any vapor balance or recovery system which includes at least the following devices, systems and procedures which are operating properly shall be considered capable of complying with the performance requirement of Section 4.2A:

1. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any gasoline can be loaded.

2. A device to ensure that the vapor-tight collection line will close upon disconnection so as to prevent release of gasoline vapors.

3. A device or procedure which will cause loading to be ceased prior to any liquid overflow.

4. A device to accomplish complete drainage before the loading device is disconnected, or a device to prevent gasoline drainage from the loading device when it is not in use.

5. Pressure-vacuum relief valves that are vapor tight and set to prevent emission of displaced gasoline vapors during loading of any stationary vessel located above ground.

C. Any person proposing an equivalent control system pursuant to Section 4.2A shall demonstrate to the satisfaction of the Department that the proposed system will comply with the performance requirement of Section 4.2A.

4.3 The provisions of Sections 4.1 and 4.2 shall not apply to the following:

A. Any stationary storage vessel located at a gasoline dispensing facility and equipped with a floating roof, or the equivalent thereof as approved by the Department.

B. An above-ground stationary storage vessel with a capacity greater than 40,000 gallons (See Section 8).

Section 5 - Delivery Vessels (also see Section 6 and Section 7)

5.1 After April 30, 1980, no person shall use or permit the loading or unloading of any delivery vessel at a bulk gasoline plant, bulk gasoline terminal or gasoline dispensing facility unless the delivery vessel is designed and maintained to be vapor-tight during loading or unloading.

5.2 After June 30, 1982, no person shall load gasoline into a vapor-laden delivery vessel at any location or facility other than a bulk gasoline terminal or a bulk gasoline plant. This provision shall not apply to the loading of gasoline for use only as a source of supply for the delivery vessel engine.

Section 6 - Bulk Gasoline Plants

6.1 After April 30, 1980, no person shall load or permit the loading of gasoline from a stationary storage vessel at a bulk gasoline plant into a delivery vessel unless such delivery vessel is loaded by means of a submerged fill pipe or by bottom filling. This requirement shall not apply to any bulk gasoline plant which is in compliance with Section 6.2 on or before April 30, 1980.

6.2 After June 30, 1982, no person shall load or permit the loading of gasoline from a stationary storage vessel at a bulk gasoline plant into a delivery vessel unless:

A. The gasoline vapors and air displaced from the delivery vessel during loading are controlled by a vapor balance system which returns no less than 90% by weight of the gasoline vapors to a vapor-tight stationary storage container via a vapor-tight collection line; or an equivalent vapor balance system approved by the Department.

B. Any vapor-laden delivery vessel which is equipped and controlled with at least the following devices, systems and procedures which are operating properly shall be considered capable of complying with the performance requirement of Section 6.2A:

1. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any gasoline can be loaded.

2. A device to ensure that the vapor-tight collection line will close upon disconnection so as to prevent release of gasoline vapor.

3. A device or procedure by which will cause the loading to be ceased prior to any liquid overflow.

4. A device to accomplish complete drainage before the loading device is disconnected, or a device to prevent gasoline drainage from the loading device when it is not in use.

5. Pressure-vacuum relief valves that are vapor-tight and set to prevent emission of displaced gasoline vapor during loading of the delivery vessel.

6. Hatch openings that prevent the release of the atmosphere of volatile organic compounds during loading of the delivery vessel.

C. Any person proposing an equivalent control system pursuant to Section 6.2A shall demonstrate to the satisfaction of the Department that the proposed system will comply with the performance requirement of Section 6.2A.

6.3 No owner or operator of a bulk gasoline plant shall permit gasoline to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

Section 7 - Bulk Gasoline Terminals

7.1 After June 30, 1982, no person shall load or permit the loading of gasoline from any stationary storage vessel into a delivery vessel at a bulk gasoline terminal unless the gasoline vapors and air displaced from the delivery vessel are controlled by a vapor recovery system which captures displaced vapor and air via a vapor-tight collection line and recovers the vapor such that emissions of volatile organic componds to the atmosphere do not exceed 80 milligrams per liter of gasoline loaded; or an equivalent control method approved by the Department.

7.2 Any vapor-laden delivery vessel which is equipped and controlled with at least the following devices, systems and procedures which are operating properly shall be considered capable of complying with the performance requirement of Section 7.1:

A. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any gasoline compound can be loaded.

B. A device to ensure that the vapor-tight collection line will close upon disconnection so as to prevent release of gasoline vapor.

C. A device or procedure by which will cause the loading to be ceased prior to any liquid overflow.

D. A device to accomplish complete drainage before the loading device is disconnected, or a device to prevent gasoline drainage from the loading device when it is not in use.

E. Pressure-vacuum relief valves that are vapor-tight and set to prevent emission of displaced gasoline vapor during loading of the delivery vessel.

F. Hatch openings that prevent the release of the atmosphere of volatile organic compounds during loading of the delivery vessel.

7.3 Any person proposing an equivalent control system pursuant to Section 7.1 shall demonstrate to the satisfaction of the Department that the proposed system will comply with the performance requirement of Section 7.1.

7.4 No owner or operator of a bulk gasoline terminal shall:

A. Allow gasoline to be discarded in sewers or stored in open containers or handled in any manner that would result in evaporation; nor,

B. Allow the pressure in the vapor collection system to exceed the tank truck or trailer pressure relief settings.

Section 8 - Petroleum Liquid Storage

8.1 After December 31, 1980, no person shall store any petroleum liquid having a true vapor pressure greater than 1.5 psia, at actual storage conditions in any existing stationary storage vessel of more than 40,000 gallons capacity unless :

A. The vessel is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, or

B. The vessel is equipped and maintained with a floating roof, consisting of a pontoon-type, double-deck-type, or an internal floating cover which rests upon and is supported by the surface of the liquid and is equipped with a closure seal or seals to close the space between roof edge and tank wall. The seal or any seal fabric shall have no visible holes, tears, or other openings, or

C. The vessel is equipped and maintained with an equally effective alternate control system approved by the Department.

8.2 All openings, except stub drains, in any stationary storage vessel subject to the provisions of this subsection 8.1 shall be equipped with covers, lids, or seals such that all of the following conditions are met:

A. The cover, lid, or seal is in the closed position at all times, except when in actual use.

B. Automatic bleeder vents are closed at all times, except when the roof is floated off or landed on the roof leg supports.

C. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

8.3 After December 31, 1980, no person shall store any petroleum liquid having a true vapor pressure greater than 1.0 psia but no greater than 1.5 psia at actual storage conditions, in any existing stationary storage vessel of more than 40,000 gallons capacity unless:

A. The average monthly storage temperature calculated as the arithmetic average for each calendar month from bulk liquid temperatures is determined and recorded at least once every seven days; and

B. The true vapor pressures of the petroleum liquids stored are determined and recorded, or

C. The vessel is a type described in Section 8.1A., B., or C.

Section 9 - Surface Coating Operations

9.1 No person shall cause or allow the emission of volatile organic compounds from any coating line in excess of an applicable emission rate as shown in Table I.

9.2 The provisions of this Section shall not apply to any coating line having an emission rate less than 40 pounds during any one day.

9.3 The VOC emission limits prescribed in A.1. of Table I shall be achieved by the use of (a) low-solvent coatings, or (b) equipment changes, or (c) process changes, or (d) abatement hardware, or (e) paint application transfer efficiency improvements or any combination of the above which achieves equivalent emission reductions for such affected operations.

Section 10 - Miscellaneous Petroleum Refinery Sources

10.1 Vacuum Producing Systems: No person shall use or permit the use of a vacuum producing system at a petroleum refinery unless such system is equipped with a vapor loss control device that either vents non-condensable vapors to a firebox, incinerator or compresses the vapors and adds them to the refinery fuel gas; and unless the associated hot wells are covered and equipped with a vapor control device that incinerates the vapors.

10.2 Wastewater Separators: After December 31, 1980, no person shall operate any wastewater separator at a refinery unless:

A. Each compartment of such separator and forebays are equipped with a solid cover with all openings sealed and totally enclosing the liquid contents, or an equivalent method approved by the Department, and

B. All openings in covers, separators, and forebays are equipped with lids or seals such that the lids or seals are in the closed position at all times except when in actual use.

10.3 Process Unit Turnarounds: No person shall conduct or permit the conducting of a process unit turnaround unless such units are depressurized to a flare, fuel gas system or to some other combustion device before being opened for inspection or maintenance. Such units shall be depressurized to 5 psig or below before venting to the atmosphere.

TABLE 1

VOLATILE ORGANIC COMPOUND EMISSIONS FOR COATING LINES

Allowable Emission Rate,
Pounds per Gallon (1)

COATING LINE	EFFECTIVE DATE - YEARLY AVERAGE (2)							
December 31:	1978	1979	1980	1981	1982	1983	1984	1985
A. Coating of Metallic Surfaces								
1. Manufacturing of automobiles, light-duty trucks and component parts								
Lacquer Coatings								
Prime Coat			1.2					
Surfacer			2.8					
Topcoat				5.0				2.8
Final Repair					4.8			
Enamel Coatings								
Prime Coat/Surfacer		4.2				3.4		1.4*
Topcoat		3.9					3.0	2.8
Final Repair	4.8							
2. Coils					2.6			
3. Large appliances					2.8			
4. Metal furniture	3.0							
B. Coating of Nonmetallic Surfaces								
1. Fabric					2.9			
2. Vinyl					3.8			
3. Paper					2.9			

(1) Pounds of volatile organic compounds emitted per gallon of coating (minus water), as applied.

(2) For automobiles and light duty trucks, this is arithmetic average of all colors at any time.

* Equivalent to a primer rate of 1.2 and a surfacer rate of 2.8 pounds per gallon.

Section 11 - Solvent Metal Cleaning

11.1 Cold Cleaning Facilities

A. After April 30, 1980, no person shall operate a cold cleaner unless all of the following control requirements are met:

(1) Covers shall be provided and if solvent volatility exceeds 0.3 psi measured at 100°F (15.5 mm Hg at 38°C) or the solvent is agitated or the solvent is heated, then the covers must be designed so that they can be easily operated with one hand. Covers for larger degreasers may require mechanical assistance by spring loading, counterweighting or powered systems.

(2) Drainage facilities shall be provided and if solvent volatility exceeds 0.6 psi measured at 100°F (31 mm Hg at 38°C), then the drainage facilities must be internal so that parts are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) If solvent volatility exceeds 0.6 psi measured at 100°F (31 mm Hg at 38°C) or if the solvent is heated above 120°F (49°C) then one of the following vapor loss control methods must be employed:

(i) Freeboard height that provides a freeboard ratio of at least 0.7; or

(ii) Water cover (solvent must be insoluble in and heavier than water); or

(iii) Refrigerated freeboard device, or 50 cubic feet per minute per square foot (15.2 m^3 per min. per m^2) of air; or

(iv) Carbon absorption system with a ventilation rate greater than or equal to vapor interface when the cover is open, and exhausting less than 25 parts per million of solvent by volume and averaged over a complete absorption cycle; or

(v) Any person proposing an equivalent control method shall demonstrate to the satisfaction of the Department that the proposed method has an efficiency at least equal to that provided by the methods specified by this subsection.

B. After April 30, 1980, no person shall operate a cold cleaner unless all of the following operating procedures are met:

(1) If the degreasing operation calls for spraying of solvent, then the spray must be a solid stream of fluid, and not a fine atomized or shower type spray, at a pressure sufficiently small so as not to cause excessive splashing.

(2) The cover on the degreaser shall be closed at all times when parts are not being handled in the cleaner.

(3) Solvent carryout shall be minimized by tipping out any pools of solvent on cleaned parts and then draining the cleaned parts for at least 15 seconds, or until dripping ceases.

(4) Porous or absorbent material, such as cloth, leather, wood or rope shall not be cleaned in the degreaser.

(5) Waste solvent shall be stored only in closed containers unless demonstrated to be a safety hazard, and disposed of such that no more than 20 weight percent or 1.5 gallons (5.66 liters), whichever is less, is allowed to evaporate into the atmosphere.

(6) Exhaust ventilation in the degreaser area shall not exceed 65 cubic feet per minute per square foot (19.8 m^3 per min. per m^2) of degreaser open area unless necessary to meet OSHA requirements. Fans shall not be used near the degreaser opening.

(7) A permanent label summarizing the proper operating procedure as provided in this section shall be posted conspicuously on or near the degreaser.

11.2 Open Top Vapor Degreasers

A. The provisions of this subsection shall not apply to an open top vapor degreaser having an air/vapor interface less than 10 square feet provided that any such new open top vapor degreaser complies with the provisions of (C) of this subsection.

B. After April 30, 1980, no person shall operate an open top vapor degreaser unless all of the following control requirements are met:

(1) Covers for the degreasers shall be provided that can be opened and closed easily without disturbing the vapor zone.

(2) The degreaser shall be equipped with all of the following safety switches:

(i) A condenser flow switch and themostat which shut off the heat if the condenser coolant is either not circulating or too warm; and

(ii) A spray safety switch which shuts off the spray pump if the vapor level drops more than 4 inches (10 cm).

(iii) A vapor level control thermostat which shuts off the heat when the vapor level rises too high.

(3) If the degreaser has an open area larger than 10 square feet (1 m^2) the unit shall be equipped with one of the following vapor control methods:

(i) Refrigerated freeboard device; or

(ii) Freeboard ratio greater than or equal to 0.75 and a powered or mechanically assisted cover;

(iii) Enclosed design, i.e., cover or door opens only when dry part is actually entering or leaving unit; or

(iv) Carbon absorption system with a ventilation rate greater than or equal to 50 cubic feet per minute per square foot (15 m^3 per min. per m^2) of air to vapor interface area when the cover is open, and exhausting less than 25 parts per million by volume averaged over a complete absorption cycle; or

(v) Any vapor control method of an efficiency equivalent to or greater than the methods described in paragraphs A(3)(i) through (iv) of this section, provided such other method is approved by the Department.

C. After April 30, 1980, no person shall operate an open top vapor degreaser unless all of the following operating procedures are met:

(1) The cover on the degreaser shall be closed at all times except when processing work loads through the unit.

(2) Solvent carryout shall be minimized by all of the following:

(i) Racking parts to allow complete drainage; and

(ii) Moving parts in and out of the degreaser slowly, i.e., less than 11 feet per minute (3.3 m/min.); and

(iii) Maintaining the parts in the vapor zone for at least 30 seconds or until condensation ceases; and

(iv) Tipping out any pools of solvent on cleaned parts before removal from the vapor zone; and

(v) Allowing parts to dry within the degreaser for at least 15 seconds or until visually dry.

(3) Porous or absorbent materials, such as cloth, leather, wood or rope shall not be cleaned in the degreaser.

(4) Whenever practicable, a work load shall not occupy more than half of the degreaser's open top area.

(5) The degreaser shall not be loaded to the point where the vapor level would drop more than 4 inches (10 cm) when the work load is removed from the vapor zone, unless such a loading is not practicable.

(6) Solvent shall never be sprayed above the vapor zone.

(7) Solvent leaks shall be repaired immediately or the unit shall be shut down.

(8) The degreaser shall be operated such that no water is visible in the solvent exiting the water separator.

(9) Waste solvent shall be stored only in closed containers unless demonstrated to be a safety hazard, and disposed of such that no more than 20 weight percent or 1.5 gallons (5.66 liters), whichever is less, is allowed to evaporate to the atmosphere.

(10) Exhaust ventilation shall not exceed 65 cubic feet per square foot ($20\ m^3 m^{-2}$) of degreaser open area unless necessary to meet OSHA standards. Fans shall not be used near the degreaser opening.

(11) A permanent label summarizing the proper operating procedures as provided in this section shall be posted conspicuously on or near the degreaser.

11.3 Conveyorized Degreasers

A. The provisions of this subsection shall not apply to a conveyorized degreaser with an air/vapor interface area less than 20 square feet provided that any such new conveyorized degreaser complies with the provisions of (C) of this subsection.

B. After April 30, 1980, no person shall operate a conveyorized degreaser unless all of the following control requirements are met:

(1) Conveyorized degreasers with an air to vapor interface area greater than 20 square feet ($1.8\ m^2$) shall be equipped with one of the following vapor control methods:

(i) A refrigerated freeboard device; or

(ii) A carbon absorption system with a ventilation rate greater than or equal to 50 cubic feet per minute per square foot ($15.2\ m^3$ per minute per m^2) of air to vapor interface area when the cover is open, and exhausting less than 25 parts per million of solvent by volume averaged over a complete absorption cycle; or

(iii) Any vapor control method of an efficiency equal to or greater than the devices described in paragraphs A(1) (i) and (ii) of this section, provided such other method is approved by the Department.

(2) The degreasers shall be equipped with either a drying tunnel or some other acceptable means, such as tumbling baskets sufficient to prevent cleaned parts from carrying out solvent liquid or vapor.

(3) Entrance and exit openings of the degreasers shall be minimized so that they silhouette work loads such that the average clearance between parts and the edge of the opening is either 4 inches (10 cm) or less than 10 percent of the width of the opening.

(4) Covers shall be provided for closing off the degreaser openings during shutdown periods.

(5) For conveyorized vapor degreasers, all of the following safety switches shall be required:

(i) Condenser flow switch and thermostat which shut off the heat if the condenser coolant is either not circulating or too warm; and

(ii) A spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 4 inches (10 cm); and

(iii) A vapor level control thermostat which shuts off the heat when the vapor level rises too high.

C. After April 30, 1980, no person shall operate a conveyorized degreaser unless all of the following operating procedures are met:

(1) Covers shall be placed over degreaser openings during all down time periods.

(2 Solvent carryout losses shall be minimized by racking parts to allow for full drainage and by maintaining the vertical speed at less than 11 feet per minute (3.3 m/min.).

(3) Porous or absorbent materials, such as cloth, leather, wood or rope will not be cleaned in the degreaser.

(4) Solvent leaks are to be repaired immediately or the unit is to be shut down.

(5) The degreaser shall be operated such that no water is visible in the solvent exiting the water separator.

(6) Waste solvent shall be stored only in closed containers unless demonstrated to be a safety hazard, and disposed of such that no more than 20 weight percent or 1.5 gallons (5.66 liters), whichever is less, is allowed to evaporate to the atmosphere.

(7) Exhaust ventilation in the degreaser area shall not exceed 65 cubic feet per minute per square foot (20 m^3 per min. per m^2) of degreaser open area unless necessary to meet OSHA requirements. Fans shall not be used near the degreaser openings.

(8) A permanent label summarizing the proper operating procedures as provided in this section shall be posted conspicuously on or near the degreaser.

Section 12 - Cutback Asphalt

12.1 After December 31, 1980, no person shall use or permit the use of cutback asphalt for highway paving purposes except for effecting emergency repairs of potholes and/or filling cracks in highway pavement. Such emergency use of cutback asphalt shall not occur during the period from May 1 through September 30.

12.2 In the event other materials or technologies become available which are technically and economically feasible and environmentally acceptable the use of cutback asphalt for highway paving purposes shall be immediately discontinued for the use of pothole repairs and/or crack filling and the new technology and/or material used.

Section 13 - Sampling Procedures

13.1 The procedure to be followed in determining the volatile organic content of any surface coating shall be: ASTM D 2369-73

13.2 The procedure to be followed in determining the solids content of a sample containing volatile organic material shall be: ASTM D 1644-59 Method A.

REGULATION NO. XXV

REQUIREMENTS FOR PRECONSTRUCTION REVIEW

Section 1 - General Provisions

1.1 Requirements of this regulation are in addition to any other requirements of the State of Delaware Regulations Governing the Control of Air Pollution.

1.2 Any stationary source which will impact an attainment area or an unclassifiable area as designated by the EPA pursuant to Section 107 of the CAA is subject to the regulations of Section 3, Prevention of Significant Deterioration (PSD). Until such regulations are promulgated by the State of Delaware, the applicable regulations are those promulgated by EPA (currently, Federal Register, Volume 43, No. 118, dated June 19, 1978).

1.3 Any stationary source which will impact a non-attainment area as designated by the EPA pursuant to Section 107 of the CAA is subject to the regulations of Section 2, Emission Offset Provisions (EOP).

1.4 A source may be subject to PSD for one pollutant and to EOP for another pollutant, or may affect both attainment or unclassifiable areas and a non-attainment area for the same pollutant.

1.5 Any emission limitation represented by Lowest Achievable Emission Rate (LAER) may be imposed by the Department pursuant to regulations adopted under Section 2 herein notwithstanding any emission limit specified elsewhere in the State of Delaware Regulations Governing the Control of Air Pollution.

1.6 Any emission limitation represented by Best Available Control Technology (BACT) may be imposed by the Department pursuant to regulations adopted under Section 3 herein notwithstanding any emission limit specified elsewhere in the State of Delaware Regulations Governing the Control of Air Pollution.

1.7 No stationary source shall be constructed unless the applicant can substantiate to the Department that the source will comply with any applicable emission limit or New Source Performance Standard or Emission Standard for a Hazardous Air Pollutant as set forth in the State of Delaware Regulations Governing the Control of Air Pollution.

Section 2 - Emission Offset Provisions (EOP)

2.1 Applicability - The provisions of this Section shall apply to any person responsible for any proposed new major source or group of sources or any proposed major modification of such sources with allowable emission of volatile organic compounds exceeding 50 tons per year or 1,000 pounds per day or 100 pounds per hour, whichever is more restrictive.

2.2 Definitions - For purposes of this Section, the following definitions also shall apply:

A. "Facility" means an identifiable piece of process, combustion or incineration equipment. A stationary source is composed of one or more air contaminant emitting facilities.

B. "Fixed capital cost" means the capital needed to provide all the depreciable components.

C. "Major Source" means any source which has a potential to emit volatile organic compounds at a rate equal to or greater than 100 tons per year.

D. "Major Modification" means any physical change in, change in the method of operation of, or addition to a stationary source which increases by 100 tons per year or more its potential to emit volatile organic compounds (including volatile organic compounds not previously emitted and taking into account all accumulated increases in its potential to emit volatile organic compounds which have occurred at the source since the effective date of this regulation, or since the time of the last construction approval issued for the source pursuant to an offset determination, whichever time is more recent, and regardless of any emission reductions achieved elsewhere in the source).

(1) A physical change shall not include routine maintenance, repair and replacement.

(2) A change in the method of operation, unless previously limited by permit conditions, shall not include:

(i) An increase in the production rate, if such increase does not exceed the operating design capacity of the source:

(ii) An increase in the hours of operation:

(iii) Use of an alternative fuel or raw material, if on December 21, 1976, the source was capable of accomodating such fuel or material; or

(iv) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act:

(v) Use of an alternative fuel by reason of an order or rule under Section 125 of the Clean Air Act Amendments of 1977 (P.L. 95-95);

(vi) Change in ownership of a source, or

(vii) Use of refuse derived fuel generated primarily from municipal solid waste.

E. "Reconstruction" will be presumed to have taken place where the fixed capital cost of the new components exceed 50 percent of the fixed capital cost of a comparable entirely new facility or source. However, any final decision as to whether reconstruction has occurred shall be made in accordance with the provisions of 40 CFR 60.15(f)(1)-(3). A reconstructed source will be treated as a new source for purposes of this section, except that use of an alternative fuel or raw material by reason of an order in effect under Section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), by reason of a natural gas curtailment plan in effect

pursuant to the Federal Power Act, or by reason of an order or rule under Section 125 of the CAA, shall not be considered reconstruction. In determining best available control technology for a reconstructed source, the provisions of 40 CFR 60.15(f)(4) shall be taken into account in assessing whether a standard of performance under 40 CFR Part 60 is applicable to such source.

2.3 Conditions for Approval - No person subject to the provisions of subsection 2.1 shall install a major source of volatile organic compounds or make a major modification to a source which will cause or contribute to any violation of the national ambient air quality standards for ozone within an area of non-attainment for that pollutant unless the following conditions are met:

A. The new major source is controlled by the application of lowest achievable emission rate (LAER) control technology.

B. All existing sources in the State owned or controlled by the owner of the proposed source are in compliance with all applicable local, State and federal regulations or are in compliance with a consent order specifying a schedule and timetable for compliance.

C. To the extent that allowable emissions of VOC from the new major source or modification will exceed the growth allowance in the State Implementation Plan, an emission reduction from existing sources shall be provided prior to start-up of the applicable source such that total allowable emissions from the existing sources and new major sources will be less than that allowed from the existing source under the existing state implementation plan requirements. Where no emission limit exists under the state implementation plan, the level of emissions in existence at the time the permit application is filed shall be used in determining the baseline for the emission reduction.

D. The emission reduction required by Section 2.3C is implemented such that there is a net air quality benefit in the affected area.

E. The application for construction permit pursuant to Regulation No. II shall include an analysis of alternative sites, sizes, production processes and environmental control techniques for such proposed source which demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.

2.4 Enforcement of Emission Offsets

A. Whenever the emission reduction required by paragraph 2.3(c) is obtained from sources controlled by the owner of the applicable source (internal emission offset), the reduced emission limitation shall be specified by the Department in a condition of the operation permit for any affected source and any such limitation shall be a requirement of the State Implementation Plan.

B. Whenever the emission reduction required by paragraph 2.3(c) is obtained from sources controlled by persons other than the owner of the applicable source (external emission offset), the reduced emission limitation shall be specified by the Department in a regulation promulgated as a revision of the State Implementation Plan.

Section 3 - Prevention of Significant Deterioration (Reserved)